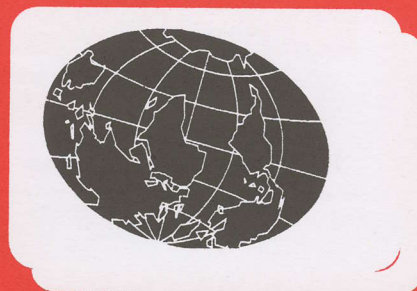


Bob Cooper's

OCTOBER 15 2006

SatFACTS

MONTHLY



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Satellite Piracy
World-Wide**

**PIRATE
KINGS OF
SWEDEN**

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Taking "the
world" by storm**

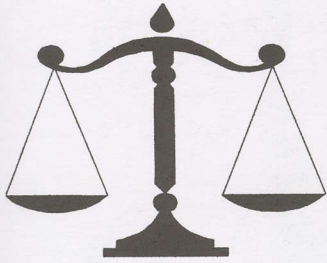
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Vol. 13 ♦ No. 146

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PROGRAMMER
PROGRAMMING
PROMOTION

UPDATE

OCTOBER 15, 2006

"Can't track the bird?"

"I am a SKY NZ installer and am being driven crazy by customers who believe I have some magic fix for their periodic (mornings usually) loss of TVOne and other channels, almost like it was set to a clock. What do I tell them - what do I do?"

Name withheld on request

By early to mid-November, the launch of D1 going as planned, all should be well again. However, see the challenges remaining before that happens, p. 4 here. An aside - TVNZ at their Avalon uplink site for FreeView has installed automatic satellite tracking equipment, just in case.

"SKY NZ Dual LNB?"

"My SKY installation LNB was recently replaced at Sky's insistence with a new Sharp BS1D2AQ112L model which says on it, 'LO 10.75 GHz'. It has a pair of front-end heads, for two satellites. Can you explain why and for what purpose?"

Connie, Wellington

We can but will make you wait until SF#147 for a full report. The 10.75 converts the existing B1-to-be-D1 12.25 to 12.75 range on one head to 1500-2000 MHz L-band while the same LO feeding the second head will convert 11.75 to 12.75 into L-band 950-2000 MHz. Head #1 points at B1/D1 (160E) while head #2 will intercept signals from D2 (C1 at present) (156E) in the 11.7-12.2 GHz frequency region. There is a reason for all of this - think ahead and we'll tell you what SKY NZ (+ Foxtel Australia) options are long term in SF#147.

"Out of stock"

"I am shocked, surprised, baffled by the demand through us at SKY TV NZ for the new 'MySky' delayed playback hard drive receivers. There is an incredible demand for this which I for one did not expect when we were initially told about the new option available to subscribers."

Installer, South Island

And most everyone else including SKY is amazed at the take-up of the receivers. They are expensive for the consumers, and not all that friendly to use, but the demand is now measured in 'container loads.' It shows, perhaps, NZ consumer's interest in the latest electronic toys - which this certainly qualifies to be. Wait until the 'real technology' is available here!

FreeView NZ? It is now apparent anything coming out of TVNZ concerning the timing for their new free to air (self-named FreeView) service, whether satellite delivered or terrestrial, should be absorbed with significant scepticism. It just ain't gonna happen when, and as, they have been telling the general press. Internal "memos" provided to SatFACTS lay out the real scenario and we share highlights here:

1/ Terrestrial: Will use MPEG-4, not MPEG-2; for real! It will start as standard definition, (SD) later be (over air) upgraded to high definition (HD). Pusher here was Sky owned Prime which wants to be HD from day one, CanWest saw long term benefits to MPEG-4, BCL was in favour as well "*but only if somebody else pays for it.*" Leaving TVNZ as the only supporter of MPEG-2. Yes, of course this makes the selection of terrestrial STBs even "more interesting" for those who might like to be a part of that supply line. The MED web site should have a new digital-terrestrial-UHF channel plan posted by the time you read this.

2/ No way. No way there will be more than token test DVB-T transmitters running before late - very late - 2007. Even terrestrial STB specs for EPG and interactivity remain to be sorted out - maybe by Christmas 2007 we can expect hardware in shops, a major media blitz pushing the ADvantages of DVB-T. "AD?" Think of ADvantages to advertising sales, nothing more.

3/ Satellite: NO EPG to begin with, target date for full FreeView is March 2007 to coincide with STBs, antennas in major retail outlets. Not before except through 'insider sources' (such as here; that is not to say we will not see FreeView services 'testing' before March 2007 - we will). Will SKY set top boxes work with FreeView? It still remains a 'sticking point' between SKY and FreeView folks - ultimately up to SKY to tell their universe of boxes it is 'OK - here's how' to intercept FreeView. But why should they as long as Prime remains solely on Sky, not on Freeview? TVNZ believes that if FreeView box sales take off, Prime (SKY) will reconsider their present stonewalling of FreeView package including Prime; it comes down to homes watching FreeView and not able to access Prime programming. Sky's position is to wait and see what FreeView offers that is NOT a part of SKY's package - such as a 24 hour TVNZ-plus NZ news channel. If that was available, but not to SKY viewers locked out of FreeView, they would be prompted to "trade" Prime on FreeView for allowing Sky decoders to access FreeView.

FreeView? TVNZ is playing "difficult" over their claim to be the sole "rights owner" for the "FreeView" name. And sending "threatening lawyer letters" to those who might believe otherwise. About which - "Independent Free To Air Digital Group" (IFTADG) at PO Box 3262, Wellington says they are now the owner. See photo, page 27, here.

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One if by wire, two if by wireless?

"I remember reading perhaps ten years ago in SatFACTS or Coop's Technology Digest a forecast that seemed absurd at the time - it went something like, 'all that has for decades been delivered by wire will become wireless while all that has been wireless will switch to wire.' The essence was that wired-telephones would be replaced with wireless, and wireless broadcasting (including television) would switch to wire. Reading SatFACTS convinces me this statement was way ahead of but spot on its time. I feel quite uncomfortable with all of this - as if my life in broadcasting has been for naught!"

FC, New Zealand

Transition is always difficult, and for those 50+ reading this, it is especially unnerving to see something we have grown up with and depended upon for our livelihood changing and outside of our influence. We all like and mostly admire 'progress' but 'wholesale change' is stressful. It is much like the death of a close friend.

Price of FreeView STB?

"You have written extensively concerning the expected retail/consumer price (in NZ\$) for terrestrial FreeView boxes. Our local Tesco supermarket has take-home and plug-in UK STBs for UK45. The HD versions (1080P50 and 720P50) versions are of course not yet available, as the BBC is only testing HD at the present time. They are forecasting 2010 before we have HD versions on the shelves but I would expect them much sooner. Do the math - your NZ\$200 number is not that far off."

PW, UK

We did the math - NZ\$127.68 as of October 6. But then, in the UK there are nearly a dozen competitive models available and here in NZ we will have only a few models and limited competition. And it will be some time before Big and Fresh has them in stock!

SPACE Pacific Reports?

"I see that TV series produced by SatFACTS and SPACE Pacific is now being run on Tony Dunnett's Auckland uplink, Tuesday evenings. Will there be new SPRs as well?"

Billy T, Wellington

SPACE Pacific Reports was produced in the peak years of C-band FTA and while the trade association was sponsoring trade shows in NZ and Australia (1994-2001). There are 14 one hour shows covering a range of regional and international topics. No new shows are likely to be produced although SatFACTS does have others in archive.

HARDWARE EQUIPMENT PARTS

UPDATE

OCTOBER 15, 2006

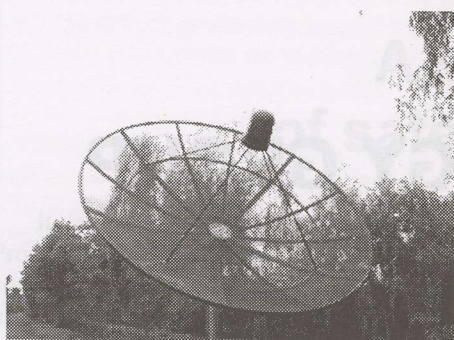
D1 - finally??? October 13th (12th in French Guyana) as we go to press; representatives from SKY NZ are booked to fly to Paris, then back to Guyana to witness the event (one of the perks of working for Sky!). Let us assume (1) it goes on 13th, (2) that the first satellite in the launch (DirecTV 9S) separates OK, then (3) 5 minutes later - 32 minutes after lift-off - D1 separates properly, (4) both make the transfer orbit from elliptical to geostationary, (5) D1 drifts properly to 160E (actually, it will go to an unannounced testing location first), (6) tests go OK, and it NOW is moved to 160E to co-locate with B1 (which, hopefully, has not expired in the interim) and (7) traffic from B1 is 'handed off' to D1, one transponder at a time. So how much time has expired? Weeks. Three would be about average, taking us to November 3 or after.

And not a minute too soon, whenever it happens. From early August B1 has been allowed to drift in a figure-8 orbit, north and south of the equator, to milk the tired satellite for every ounce of station keeping fuel. Unfortunately, at the extremes of the '8' the SKY NZ uplink antenna beam has been too narrow - B1 has simply drifted out of the uplink antenna pattern leaving 'Blue Rain Fade' announcements on hundreds of thousands of Sky decoder boxes nation-wide. Sky has attempted to auto-track the drifting pathway of B1, resulting in even longer outage periods and then reverted back to manual tracking of the satellite's figure 8 pattern - subject to human error at the manual tracking control panel. More blue screens.

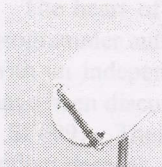
There are concerns - serious concerns in some quarters at Sky - about how the new D1 coverage pattern will duplicate the original B1 pattern. Installers north of Auckland to the tip of North island have been warned to expect "problems" with some 60, even 76cm dish equipped customers losing service totally when D1 takes over. And then we have a major effort to change out existing LNBs with a single head and 11.300 LO (local oscillator) for the newer twin-head version that is designed for switchable reception between D1 vertical and D2 vertical (using 10.75 GHz LO); D2 will co-locate with C1 at 156E "sometime later in 2007" and built into D2 will be a 11.700-12.200 GHz "new" downlink band. All of this is a brand new SKY NZ 'ball game' and the learning curve and technical adjustments ahead could be very challenging indeed. We'll have a thorough technical heads-up in SF#147.

Those amazing TV tuners. Only a few years ago, TV tuners were designed for three major variations - PAL, NTSC and SECAM. No more. TV tuners must handle analogue, digital, and a variety of digital formats. Now there are TV transmissions spread from 45 MHz to 12,750 MHz in more modulation formats than most of us can count. The challenge for TV tuner designers is to include as many of these as possible into tiny tuner chips rapidly approaching the size of a postage stamp. Details SF#148.

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Speaker Stand for caravan use Ku dish	\$40	Star LED Easy to use Satellite Meter	\$85

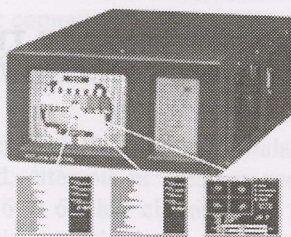
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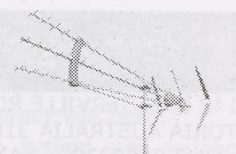
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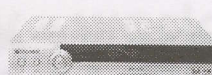


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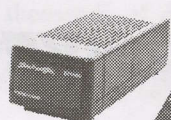
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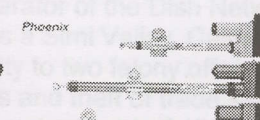
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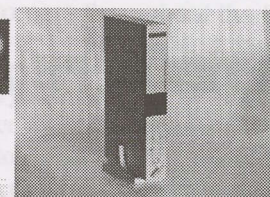
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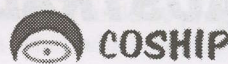
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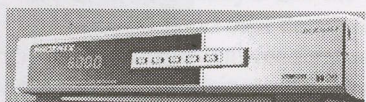


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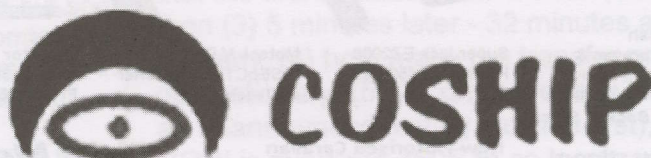
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A survey of the status of satellite piracy - worldwide

It is the 'forbidden' or 'taboo' subject; satellite piracy. Programmers would like us to believe they have it under control, that wholesale piracy by tens of thousands of dish users is history. In fact, some systems do remain largely (if not totally) uncracked, free of *wide scale* piracy. Name one? NDS is one, there may not be others.

The heart of all modern piracy is an ability to 'emulate' a programmer authorised piece of plastic known as a 'smart card' with an independently unauthorised plastic card. Smart cards have been discussed at length in SatFACTS previously (SF#95 - SF#99). Their origin comes from a California physicist of Indian descent, BK Marya in the 1980s. What Marya brought to the mixture was something quite remarkable for the era of its development; a credit card shape and size plastic device embedded with an electronic memory circuit; a 'miniature chip' in the language of electronics. Marya's card could be preloaded before delivery/sale, or as was later perfected, via a (satellite) fed set of instructions. It was the latter development which turned the corner.

All CA/Conditional Access system designs depend upon a sequence of closely timed 'events' to establish the protection pay-programmers require. And the ability for each individual subscriber to be electronically 'identified' through a unique-to-the-card set of letters and numbers - think of serial numbers. Conditional access is a set of programmer created instructions, either permanently embedded in the smart card, or loaded to the receiver through the smart card from the complex data bits flowing within the satellite programmer's stream.

There are any number of approaches to CA - if data bits are sent through the satellite stream, and are married to some previously embedded data in the smart card, with the requirement that the data stream 'live bits' and the embedded bits fall into line to a precise timing requirement, any 'mis-timing' of the married bits causes the receiver to go out of sync with the decoding system. Piracy in this case requires a correction of the timing sequence.

Other approaches create mathematical computations to unlock the CA mode; think of " $A + B + C = XX$ " and then stick B into the smart card while A and C come off the satellite feed. The card and the data stream communicate, each providing data to 'solve' the computation - and until it is solved to the satisfaction of the receiver, no reception occurs.

Card hackers

It is all about 'numbers' (data bits) to a formula. Before plastic smart cards existed, attempts at creating conditional access encryption used a 16 to 64 'leg' circuit board mounted chip to do these computations or timing comparisons. Early hackers of the original Videocipher encryption system (created by US firm M/A Com and popularised by successor GI/General Instrument) initially desoldered these sizeable computation chips from the receiver circuit boards, reprogrammed the chips and then soldered them back in place. Each time the programmer changed the numerical sequence, out came the chip for reprogramming.

Theft of Dish Network: 15 years in the slammer

"EchoStar, operator of the Dish Network satellite TV service, reports a Simi Valley, California man agreed to plead guilty to two felony offences for theft of satellite signals and theft of trade secrets. Alexander Gluzman faces a maximum of 15 years in prison and a fine of more than (US) \$750,000 plus restitution.

The FBI executed a search and seizure warrant against Gluzman in March based on a surveillance operation conducted by EchoStar and NagraStar, which provides security services and equipment to customers throughout the USA and Canada."

-Rocky Mountain News-

BK Marya saw this as an unnecessary set of make-work because even the authorised distributors of such receivers were required to deal with soldering, reprogramming and resoldering chips when circumstances changed. His card had the advantage that it could be programmed alone (or enmasse - hundreds at a time) with a device to become known as a 'card reader/writer' which conveniently, by the mid-1990s, connected to small (home) PCs. Reprogramming had become a fairly simplistic chore that began with entering strokes onto a keyboard, provided you knew the 'software' language.

The first major programmers to adopt Marya's smart card technology would be British BSkyB and the USA DirecTV. But evolving from Marya's theoretical development work to a consumer friendly hardware system required an intermediary. Marya was an inventor, not a businessman. Enter a USA born electronics whiz named Michael Clinger who provided the enthusiasm and brains to evolve Marya's prototype plastic into a product that could be produced in the millions.

Clinger formed an Israeli company (News Datacom) and attracted the commercial interest of satellite start-up firm BSkyB. News Datacom would take on Rupert Murdoch as an investor (shortly, 80% owner leaving Clinger outside looking in) and News Datacom would grow into NDS - today the most influential and savvy of all conditional access providers.

Alas, Clinger was not pleased with the tactics used to take over control of his company, and he left a 'backdoor' in the smart card's software - a way for someone who knew that information to 'sneak in' and reprogram the card. An Irish software enthusiast named John McCormac took this information and created a wholesale invasion of the early BSkyB customer cards - by some counts more than 200,000 unauthorised cards took over the (British) marketplace in six months time. The age of serious piracy was born.

The Clinger/News Datacom system was vulnerable to unauthorised ingress, perhaps because Clinger wanted it that way as a 'pay back' to Murdoch, perhaps because it was poorly designed anyhow (see p. 12, here). Other competitors (Conax, Nagra, Irdeto to list three) appeared, each with their own approach to securing the integrity of the smart card CA system. All would be defeated by aggressive hackers - some would last a few days, some as long as a year but in the end

And the game goes on ...

On the heels of the security break-through by Echostar and Canadian satellite supplier ExpressVu (July 2006), US and Canadian satellite dealers/distributors began receiving an Email solicitation promising to correct the 'security lock down.' This is a paraphrased (edited) copy of the Email in question.

"Subject: Neusat T iPro no bin files needed EVER!

"From: Megadropshippers Management"

"FTA Receiver Dropshipping/Wholesale Opportunity of a Lifetime

"Move over Neusat, Coolsat, Viewsat & Pansat! The only receiver with permanently working bin solution is here!

"Greetings to all FTA vendors, we are the ONLY provider of the 2006 NEOSAT iPro satellite receiver in North America. Everyone is frustrated and depressed at the most recent drop off in sales due to the lack of work. Just in case you haven't heard, the NEOSAT iPro 1000 never needs to be updated and will be working for good. In case you are unaware, this model requires no updating of bin files EVER. That's right, it will work forever! This receiver will not require the constant updating that its predecessors have, no more waiting on someone to get the latest fix. No more making up excuse after excuse for the never ending delays caused by satellite frequency changes. This is absolutely fool proof for eternity. The constant badgering of your relentless customers will finally cease for good. We can dropship your FTA receiver directly to your customers in the USA and save you valuable time that you can dedicate to marketing your ever expanding company. We have state of the art order processing software that will take your order immediately, provide tracking info and save all customer data. We have a standard charge of \$24.99 to activate any new dropshipping account and we will be waiving that fee for the entire month of August, so please call or e-mail us with your sign-up information. Answers to most or all questions can be found on our newly updated Help page. (Here are) new wholesale dropshipping rates/prices: \$170 + s&h; Wholesale prices 100 lot \$155 each + s&h; 200 lot, \$145 each + s&h."

This tactic is cleverly designed to identify the ultimate users of a perhaps 'too good to be true' ("*The only receiver with permanently working bin solution is here!*") automatic updating receiver. It smacks of 'federal' (FBI) entrapment - asking dealers to supply not only their information but on the skirts of an offer to "free dropship" receivers directly to customers in the USA. Yes, of course this hands to the 'shipper' the exact location of all of those who would be expecting such a receiver - or, a knock on the door from the FBI!

none survived as 'hack proof.' Attention turned to Canada where another News Datacom system was attracting attention; DirecTV in the USA.

(At this point we connect with a recent detailed report appearing in Canada.)

Satellite Piracy in Canada is spelled FTA

In May 2005, Bell ExpressVu, Canada's largest direct-to-home (DTH) satellite provider announced that effective July 1st 2005 the company would be introducing comprehensive anti-piracy measures to thwart satellite pirates.

The real truth is that since the introduction of direct-to-home (DTH) satellite services in North America, there have been hackers who have attempted and succeeded in stealing satellite signals. The satellite hacking business has been a cat and mouse game since its inception, where hackers crack the codes to gain access to 'free' television and the satellite broadcasters respond with various ECM ([originally called] electronic counter measures) to thwart the hackers. The DTH satellite television business first began in 1979 with C-band satellites that required large 10 or 12 foot dishes. The growth of these dishes throughout North America caused the programmers to encrypt their services in 1986 and the piracy 'business' quickly followed. By 1990, four years after the initial scrambling began, an estimated 75% of all VideoCipher II units were illegally receiving services. (1)

By 1994, the big C-band dishes were on borrowed time as a new breed of satellite service began which employed high-powered Ku-Band satellites. The primary benefit for consumers of the new Ku-Band service was they only required

an 18" dish to receive signals. The benefit for broadcasters was lower cost home dish systems, a digital platform allowing more channels per satellite, and the expectation the system would now be secure from hacking. By 2006, there are four major DTH satellite providers in North America, all using Ku-Band satellites. They are: DirecTV (launching in 1994), DISH Network (1996), ExpressVu and Star Choice (both Canadian, launching in 1997).

Piracy required less than a year to crack the original C-band VideoCipher system, another year to break the "II" later version. The Ku-band DirecTV was actually hacked within a few months of launch but the appearance of the piracy equipment to consumers stretched out for an additional two years. Ku's DISH Network also lasted secure for just under a year but it would be 2001, four years later, before widespread hacking products appeared and as it turned out, because they shared a common encryption system, DISH and ExpressVu would fall simultaneously

From 1997's hacker break-through of DirecTV and DISH, the programmers responded by making small incremental changes in their data streams to counter-attack one or two 'piracy card' software programs. With widescale distribution of cards, the least complex way for the programmers to combat hacked cards was to acquire some, reverse engineer the card contents, and then redesign their own data stream to thwart the particular code then being distributed. This would shut down some pirate cards for relatively short periods of time, new cards would be designed and the sequence begun anew. The weakness in the system was on both sides - for the programmers, they could only respond when a new card appeared, 'patching' or correcting weakness in the original software design. For the pirates, each time a hack was deciphered and programmer 'corrected' there were customers to satisfy - involving an exchange of cards, or on the spot replacement or rewriting of cards. At the consumer-user level,

1/ While we do not dispute this overview, a much more comprehensive history of this era appears in "Television's Pirates: Hiding behind your picture tube," available here on p. 32

"It's not just 'free' - it is AMERICAN!"

Following a Canadian high-court decision (November, 2001) it has been illegal for Canadians to have any access - paid for by subscription or 'pirated' - to US satellite services (DirecTV or DISH Network). The decision left Canadians with no legal option save subscription to one of the two nationally available home grown satellite services (ExpressVu or Star Choice). But for Canadians, the 'holy grail' comes from America - programme channels not available on either Canadian service.

Conversely, Americans of various persuasions find some Canadian programming far more appealing than either DirecTV or DISH. An example: ExpressVu carries a large group of French language stations (Canada being a two language country) and a number of very adult triple X rated services which are simply 'politically incorrect' for the American based services answerable to the present Washington administration. A lively if not huge business exists especially in states bordering on Canada for cross-border subscriptions to ExpressVu and Star Choice although those with 'FTA' receivers have no need to be 'registered' at all.

there was always the inconvenience of losing reception for a few days or even weeks while a new replacement or rewritten card was procured.

Numbers. The sheer number of cards to be corrected, replaced, rewritten after each new 'ECM' invalidated existing cards was rapidly growing into a major logistics challenge. A 'satellite dealer' might be able to 'service' up to a few hundred clients using such cards after an ECM attack but at some point the dealer would have more cards for which he or she was responsible than could be corrected 'promptly.'

By 2002, the thieves had gained a commanding upper hand. A University study titled, "Unauthorised Satellite Use in South-western Ontario," concluded that between 550,000 and 715,000 home in Canada used unauthorised satellite services. If we take the lowest number and assign a generous 500 clients to each satellite card dealer, this suggests no fewer than 1,100 actual businesses existed at that time selling cards and servicing satellite viewers, approximately the same number of 'businesses' as there are McDonalds in Canada. None of this sounded very much like an underground, hidden operation.

An unauthorised satellite service was the industry's euphemism for anyone who subscribed to or pirated DirecTV as at that time the signal theft was confined almost exclusively to DirecTV. That was about to change.

By 2003, hacker attention had begun to focus on DISH Network and Canada's ExpressVu. When in 1997 both DirecTV and DISH proved fallible, the leaders of the hacker world made a conscious decision to concentrate on the DirecTV, leaving DISH essentially alone. Their reasoning for this decision could be a simple matter of holding DISH 'in reserve' for the day when DirecTV might become too complex to pirate, or it may have been something else.

Something else? DISH is the product of a C-Band pioneer named Charlie Ergen, who became a multi-millionaire as a creator of satellite products (EchoStar brand). Ergen has always had a particular mindset about cultivating individual installing dealers - people who would be loyal to his brand and not be skipping around selling the competition. This was a core of his launching DISH Network on Ku - encouraging complete installing dealer loyalty, folks who would not be caught dead selling the competitive DirecTV system. There is at least the hypothesis that hackers felt a similar loyalty to Charlie, and as long as they could spread the seeds of competitor DirecTV's defeat, well, if it helped Charlie (who had helped them in the past), "so much the better."

All of this came to a head early in 2004. DirecTV, now sold by General Motors/Hughes to the Murdoch empire, did a complete encryption change and it was (and remains) largely successful in shutting down piracy. The smarter pirates in Canada foresaw this happening, and by mid-2003 had begun pushing DISH and Canada's Express Vu as alternate

programming choices. For a brief period of time, really savvy dealers and customers could be enjoying the full bouquet of all three services - approaching a thousand channels of TV. The euphoria would be short lived.

In April 2004 DirecTV had completed replacing more than 12,000,000 old style smart cards with new versions and the encryption data stream which the pirates required was simply turned off. At the peak of piracy, Canadian homes alone were believed to exceed 1,000,000 with piracy connections to one or more of the three service providers. And then there were two; DISH Network and Canada's ExpressVu. So much for withholding access to either or any 'latent loyalty to Charlie.' After ten years of operating with wide scale piracy, NDS + DirecTV had found the key to keeping the pirates at bay - at least for awhile.

But a million homes depending upon American and Canadian 'free TV' would not be denied; the massive changeover from DirecTV to either DISH or ExpressVu was underway as 2004 went by. In August, ExpressVu decided they were left with no real choice - a full universe replacement of all smart cards would be the next step, ala DirecTV. It would take 11 months, into mid-2005, for approximately 1 million cards to arrive at authorised subscriber homes and one-by-one each subscriber walked/talked through their implementation. The new encryption format, known as Nagra2, went into service on July 1, 2005. In that same 11 months, US programmer DISH Network had invested hundreds of millions in replacing their own (Nagra1) cards. Seemingly, as both turned off the easily hacked '1' format data stream and customers were converted to '2' the world of piracy would collapse in North America.

Nagra 2 cracked

By early September (2005), barely two months following the whole-universe card swap, hackers in Spain had broken into Nagra 2. On September 13, the encryption company Nagra Kudelski actually issued a press statement admitting their system had been compromised. And in six weeks, November, North America would be awash in Nagra2 'hacked cards.'

Until this point all hacks required a hack-card, a replacement for the programmer issued official card. But with Nagra2 an entirely new format had developed, and it would become the most lethal of all hacker designs to date.

It began in late 2004 in Taiwan, rumours followed by private demonstrations of a FTA (free to air) receiver which had the ability to detect, sort and decode at least some of the CA formats. In three words, "No card required!" By early in 2005 versions of this were appearing in Asian markets and they would soon show up in North America. Some of the early versions required the user to use the remote control to enter 4 (+) numbers on a special receiver menu - the four digits being available on Internet. This receiver was 'quasi-FTA' meaning it

A 'Real' Pirate's take on Canada's Status

"I have read the reports as well as the Neosat iPRO promotion (page 8, here) and here are my reflections. The real cause of all of this is at the DISH/ExpressVu level. They have elected to use a smartcard with a poor design (Nagra2). It took exactly 2 days (I know - *I was there*) for Nagra2 to be dumped revealing the scrambling algorithm. Four weeks later it was 'public' (on the net). And this is where the cheap Chinese 'FTA' receivers stormed ashore in North America. When the Nagra2 keys were known, these exact keys could then be net downloaded and flashed to individual receivers. Other receivers, such as the Dreambox, could do the same thing only in this example the end-user has to add the keys manually - there was not a 'readymix' built-in by the manufacturer after loading a firmware file.

"In July, as your report states, the providers have over-the-air updated to add new keys pumping new ROM content and RSA keys into the card. They also changed the stream with CAID (conditional access identification tag) and camouflaged the true string by pretending with correct control words it was OK. This was a clever move but not new; back in 2000, Irdeto did a similar thing in South Africa by sending incorrect keys with the correct signature to confuse 'goldcards' and stop them from working. They did this by using the (now) infamous 5F command and then shot 2 new bytes into the smartcard 'correcting' the previous purposefully 'wrong key' which reversed the instructions to legal subscription cards. Goldcard users were left outside the loop because they didn't recognise the (2 byte) command.

"The Canadian/Americans have done virtually the same thing this time, although it remains a bit too 'open' if they are really intent on hiding their activity from skilled pirates.

"I must also note that the Canadian report uses the term 'ECM' which it defines as 'electronic counter measure.'

This is quite old 'hacker language talk' and the correct current interpretation of ECM is 'Entitlement Control Message' and it uses the conditional access matrix to 'correct' the true entitlement of a specific smartcard or group of cards. It can also adjust the card's access to channels, such as PPV, or even disable a card completely by erasing all permission tiers.

"Further, the 'EMM' is the 'Entitlement Management Message' which updates keys on different levels. A card can be disabled by using both methods (ECM, EMM) at the same time - erasing tiers and not updating the keys. A 'MOSC' (modified original smartcard) at this point (must be) manually updated by the pseudo-hacker with a Phoenix programmer (ISO programmer) and the equivalent loader files which are widely available through Internet.

"Finally, the claims by Neosat iPRO for their 'XFTA' automatic bin approach is a fantasy of a copywriter, a marketing 'gag' intended only to sell receivers to a gullible dealer/public market. They might have a 'fix' at the time of sale (or may not depending upon how often ExpressVu and DISH update) but the only true solution is based upon a subscription card which is constantly fed ECM and EMM to keep it alive."

worked just like a free to air device (on non-FTA channels) but only after the internal software was 'updated' with the latest 4 (or more) digit code. The beauty of this, for the Canadian satellite dealers, was that when a programmer modified a code set, the revised code could be posted on Internet and the consumer /customer, usually *without* dealer assistance, could perform his/her own update. It was a major change in the way dealer business operated - from this point, they would not be spending days (or weeks) monthly issuing replacement or updated plastic cards to get customers back functioning again.

There was more. In the case of Canadian service ExpressVu, before a home could partake of 'free' service they had to acquire a genuine, compatible, ExpressVu receiver or something very similar, or the card - hacked or original - would not function. No more.

The 'FTA' Receiver

The key to this new cardless hack was quickly dubbed the 'FTA Receiver,' not an entirely accurate description. FTA receivers had been around for nearly ten years, selling in small quantities each month to recent immigrants who wished to tap into C or Ku band 'home country feeds' which are common throughout North America. Free-to-air is just that - no encryption, no card. Start with a suitable dish and LNB, some RG6, a FTA design receiver and connect it to your TV set; instant TV from Bolivia, Egypt, Russia or China.

Receivers designated 'FTA' enter Canada (and the United States) with not even a cursory response from customs or other officials. But suddenly, by early 2006, the number of such receivers imported rose from under 10,000 per month to

30,000, 40,000 and then 50,000. Something was obviously happening here!

Throughout 2005 and into 2006, the Asian based technology, the ability to 'read' encryption codes and internally within the receiver, without a card, decode the scrambled signals, was inbuilt and only required minimal one-time technical assistance from dealers to perform this 'extra' function. In other cases, receivers designed almost exclusively to do this function were being labelled as 'FTA' giving an entirely new meaning to the term. By March 2006, the floodgates had opened and more than 50,000 of these 'FTA receivers' were pouring through per month.

To pirate ExpressVu (or DISH Network) using such a FTA receiver is a simplistic process. Buyers purchase a totally legal 'FTA receiver' for around (Canadian) \$200, go to Internet and download a 'firmware patch.' From a PC to their receiver, through an inbuilt (RS232) backside receiver connection, the firmware now turns the 'free to air' into a 'free to *ALL*' machine. Tradenames originating in Asia, primarily mainland China, such as Pansat and Coolsat, have exported upwards of 4 million of these designs world-wide and based upon import records approximately one third of these have landed in Canada or the United States. If one enters 'FTA receiver' into a Google search engine, there are high hundreds - low thousands of North American 'dealers' selling these units. Further research in Canada found a number of dealers who are selling upwards of 50 receivers per week, already 'patched' by the dealer ready to go home, plug-in and start delivering free to *ALL* reception.

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And another counter attack

And then the sky fell down in July 2006; software creators at DISH Network and their companion user of Nagra2 ExpressVu counter attacked with yet one more 'ECM.' Most of the FTA receivers stopped working. But not all, suggesting there were yet more software versions around which were resistant to the ECM. A 'real pirate,' providing analysis of the status in Canada for SatFACTS, does so on page 10, here.

Those who see a 'conspiracy' in every human activity are having a field day promulgating that somehow there is a backroom level of co-operation between those who would encrypt and those who would decrypt without authorisation. At one point in the history of encryption strong evidence suggested competitive encryption developers were actually conspiring to reveal competitive weakness. A US federal investigation into charges that NDS had broken the original

Nagra1 system in use by DISH/ExpressVu and then arranged for release of 'how-to-do-this' information using clandestine Canadian web sites was mysteriously aborted after intervention by the US White House (see 'Murdoch,' below).

Other conspiracy believers point out that at C\$200 per receiver, consumers who are forced to purchase one new updated replacement receiver every 12 months are still big dollars ahead of being actual subscribers paying two or three times that amount every 12 months for *authorised* service.

Is piracy dead? Hardly. But it is a disease that appears without warning in isolated locations, runs out of control and is then temporarily brought back to heel. And as our piracy advisor (p. 10) suggests, "For every ECM/EMM response by a programmer, there is someone, somewhere chipping away at a keyboard searching for a counter-response."

Murdoch Using Spies & Scientists to be King

(by David Richards)

Rupert Murdoch is using a team of former code-breakers, scientists and even a few ex-spy chasers in an effort to become the most powerful TV player in the world.

According to the New York Times, the (Murdoch controlled) NDS group is an organisation that could well be one of those shadowy outfits that help Jack Bauer battle bad guys on Fox Broadcasting's hit show '24.' But NDS is no creation of a conspiracy-obsessed Hollywood writer. It is what Rupert Murdoch is using a lethal weapon in the TV battle of the decade.

In the media industry's version of the arm race, no one is better equipped. News Corp owns 79% of the onetime Israeli company that comes up with tech wizardry like 'smart codes,' which are programmed with complex algorithms that keep TV beamed from Murdoch's global fleet of satellites from getting into the hands of pirates. In Australia Murdoch owns 25% of Foxtel and is keen to own one of the free to air networks with channel 10 or channel 9 tipped to be on his radar.

Now NDS's brainiacs are cooking up a jam-packed set-top box from News Corp.'s U.S. satellite service, DirecTV (DTV). The boxes will allow viewers to assemble their own shows from snippets of different programs, change camera angles for sporting events, even stream some Internet programs from the Web onto their TVs. "*Rupert sees technology as a weapon*," says NDS CEO Abe Peled, a former Israeli platoon commander and top IBM scientist.

Satellites cannot yet compete in data and phone, given the one-way service from the skies downward. But NDS is providing plenty of bells and whistles, including a service that boosted DirecTV subscriber counts by offering several games simultaneously on the screen. Its "hybrid" will use DSL to offer Internet on the TV screen. And in a lab in Costa Mesa, California researchers are readying other services: A feature that allows viewers record programs by simply clicking on the network TV promotions and another that streams content from News Corp.'s recently acquired IGN Internet game site. Further down the road is a wireless Net technology (1) that will enable video-on-demand for mobile devices.

Murdoch needs to move fast if he is to be successful. Competitor Time-Warner has a smallish unit code-named 'The Maestro Group' that helped create a service which lets viewers restart shows that have already begun. Time Warner is also making available more hours of video-on-demand than DirecTV can offer. "*NDS is Rupert's way of trying to do the best he can with a basically inferior product*," says Peter Stern, Time Warner Cable's executive vice-president for product management.

Technology hasn't always been Murdoch's friend. His company took a \$6 billion dollar (US) write-down and suffered the humiliation of gaining control of Gemstar-TV Guide International just before its CEO, Henry Yuen, resigned and was later found liable for accounting irregularities. Gemstar paid (US)\$10 million to settle a civil suit related to those allegations in 2004.

And as smart as Murdoch's NDS investment looks today, the company hasn't always been a picnic. In the early 1990s, one of Murdoch's partners in the venture, Israeli-American businessman Michael Clinger, was accused by Murdoch of overcharging the company for smart cards made by an associate. While Clinger denied the charges, News Corp. did win a (US)\$47 million civil judgement in 1998 related to the allegations. The company claims it cannot locate Clinger. Later, French satellite company Canal + (Group) sued, alleging that NDS used a hacker to break the code of Canal +'s competing smart cards and publicised the code on Internet. Canal + later withdrew the suit as a part of a business transaction, and Peled says NDS is no longer looking for Clinger. "*Last we heard, he was in Cuba and we don't think he has any money*." (2)

Since taking control of DirecTV in 2003, Murdoch's mission has been to lure subscribers from cable by slashing prices, giving away set-top boxes and paying big for ads. Now comes the second wave: a technology offensive. During a recent stroll through NDS's Costa Mesa facility, the ageing leader proudly reviewed his arsenal. "*We expect to build up new offerings and to improve DirecTV's market share*," he said with a crocodile grin.

Translation? The war for viewers is about to escalate.

1/ See p. 2, here; 2/ See "Television's Pirates," page 903 onward; and 'hello' to Clinger, reading these words!

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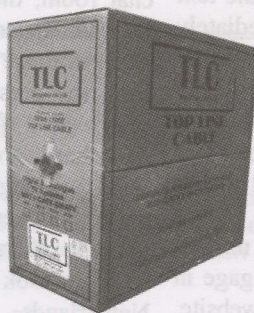
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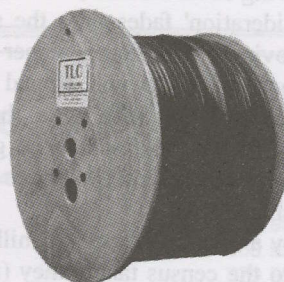
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If you think the satellite world is a can of worms ...

The (Internet) Pirate Kings of Sweden

Sweden is to Internet file swapping (a fancy term for 'piracy,' according to the MPAA, RIAA) what Canada and Germany are or have been to satellite smartcard modification. Canadian law from the first appearance of Videocipher hacking in the mid 80s through the 2002 era pretty much left hackers unchallenged, as long as they confined their work to non-Canadian encrypted materials (read American). In fact that law remains essentially unchanged even today, although at least one high court decision has attempted to modify the effect and meaning of the law. A legislative law reinterpreted by a court, is also a "grey area" that invites adventurous explorers. And so it is in Sweden relating to what an individual or group can do with 'copyrighted' materials gleaned from, or placed onto, the world wide web. We join a report 'in progress.'

"It is Saturday night and this writer is lounging on a living room sofa surrounded by lanky twenty-somethings in shorts and deep tans. Across from me, a wire emerges from a greenXbox--modified to stream movies from its hard drive--and snakes past two dusty turntables and into a video projector, which is displaying a menu of movies that would make the noted retail outlet 'Blockbuster' jealous.

"Peter, this living room's owner, selects a title, and the text 'For Your Consideration' fades onto the screen, immediately marking this movie as a leaked screener from the Academy Awards. Someone in Hollywood ripped their review DVD copy of the film and uploaded it to the Internet where it eventually found its way to this hacked game console, Peter chuckles at the appearance of the notice and the rest of the room erupts in chuckles.

"Harboured by a country where 1.2 million out of 9 million citizens reveal to the census takers they (regularly) engage in file sharing, this is as much a national symbol as it is a website. Protected by weak Swedish copyright laws, the Bay survived and grew as movie studio lawyers felled competing BitTorrent trackers one-by-one. Today it boasts an international user base and easily clears 1 million unique visitors a day. New movies sometimes appear at the top of the site's most popular list even before they flicker on a single theatre screen.

With its world-wide following, many here see the Bay as the devil on Sweden's shoulder, legitimising contempt for intellectual property rights and threatening to saddle the country with a lasting reputation for international lawlessness. 'It is very difficult to make people act legally when they have been doing something for some time,' says Marianne Levin, Professor of private law and intellectual property at the University of Stockholm. 'In Sweden the debate on file sharing came very late.'

Editor's note: This is an exact parallel to Canada where 'theft' of USA satellite services began in 1977, grew to monster proportions in 1980-1981 and exploded with the arrival of small dish Ku-band services in the mid 1990s. Canadian court decisions along the way sanctioned this 'theft' and sent programmers such as HBO back to the USA with their tail tucked between their legs.

Efforts to sink the world's largest BitTorrent tracker have backfired into political scandal, and spurred even more downloading. But the three guys behind the Pirate Bay are facing a national controversy of their own. The Pirate Bay survives and politicians and entertainment lawyers confront a youth movement that embraces file sharing. Who would have thought Sweden would end up the Internet's free content haven?

"So when, on May 31, Swedish police finally arrived with a search warrant and carted off enough servers to fill three rental vans, the entertainment industry was quick to proclaim victory (against piracy). The Motion Picture Association of America (MPAA) issued a press release announcing a milestone: 'The actions today taken in Sweden serve as a reminder to pirates all over the world that there are no safe harbours for Internet copyright thieves,' trumpeted MPAA chairman Dan Glickman.

"But the three stewards of the site -- 27 year old Peter, 28 year old Fredrik Neij and 21 year old Gotfrid Svartholm -- were already preparing their response.

"Coordinating with volunteers around in the world in an IRC chat room, the trio scrambled to relocate the Bay at a new location. Peter -- a slim, dark haired, dark eyed geek -- didn't sleep in those first few days, fielding a stream of phone calls from the press while confronting the technical challenge of resurrecting a high traffic site with a partial database and all-new hardware. 'They stole most of our backups as well,' he says. 'I managed to get some backups out of the servers while the police were (still) in the building.' Peter was not arrested with the others and remains anonymous.

"They took the resurrected data to temporary hosting in the Netherlands, and three days after the raid, 'Pirate Bay' reappeared on Internet.

"So fast was Pirate Bay's rebound that some news articles reporting the site's demise went to print after it was back up, recalls Peter. The resuscitated site had a few glitches, but the resurrection was remarkable in that it never really happened before; when the major American rights holders take a website down, it stays down. The pirates delivered a victory message to the MPAA, and the Swedish equivalent, APB, through the site's reverse-DNS, which now read: 'hey.mpaa.and.apb.bite.my.shiny.metal.ass.thepiratebay.org.'

"Thanks to the press generated by the raid, the Pirate Bay instantly became more popular than ever. The Bay's T-shirt vendor alone now has four people working full time to fill

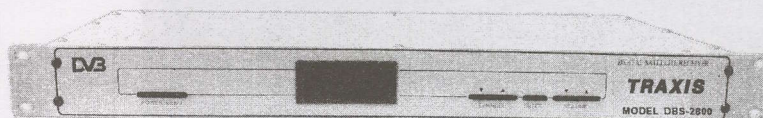
Did the Motion Picture Association ask Swedish politicians to illegally intercede with law enforcement? Barely a month after Swedish police raided their server room and carted two administrators and their legal help off in handcuffs, the lanky co-operator of the Pirate Bay--the most popular and hunted piracy site in the world--settles back to watch a pirated copy of Spanglish.



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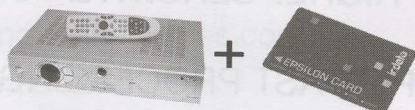
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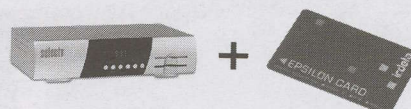
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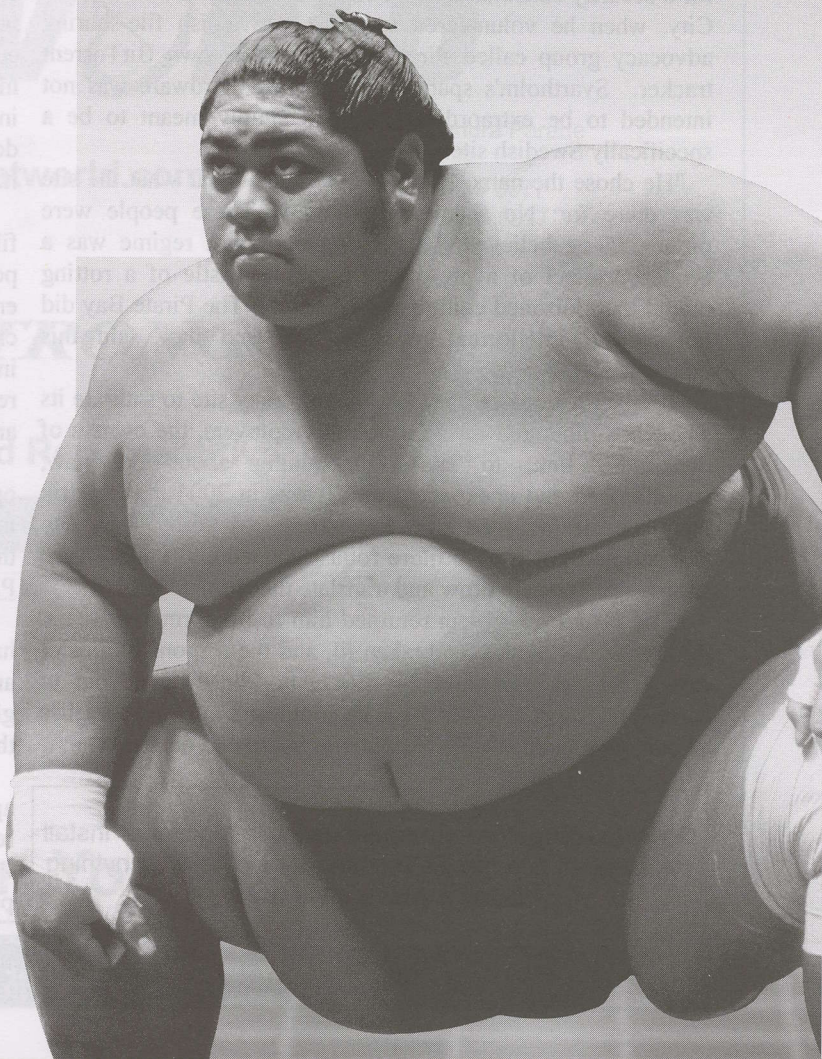
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"All of us operating The Pirate Bay are against the (present) copyright laws and want them to change. We see it as our duty to spread culture and media. Technology is just a means to do that."

orders for apparel sporting the site's pirate ship logo, and a skull-and-crossbones with a cassette tape as the skull. They are behind something like 2,000' relates Neij. 'They are working day and night.'

"The pirates have since moved the Bay's hosting back to Sweden, where they've built technological bulwarks against another takedown, law-hardening the Bay's network architecture with a system of redundant servers that spans three nations. Shutting down the site in any single country will only cripple the Pirate Bay for as long as it takes for its fall-over scripts to execute, a gap measurable in minutes.

"The various server locations are obscured behind a load balancer configured to lie, the crew says. Once the fail-safe is triggered, a determined adversary with an international team of litigators might be able to track down the servers, but by that time -- according to the plan --- the pirates will have deployed mirrors in even more countries. The theory, the corporate lawyers will eventually tire of this game of international Whack-A-Mole.

"With all of that in place, crew member Fredrik Neij says he welcomes the possibility of another raid. 'I really want the pleasure of it being down three minutes, then watching it reappear!'

Born in Mexico

"The Pirate Bay was born in the late summer of 2003, in a plain motherboard box in Mexico with a slow radio uplink to the net.

"Founder Gottrid Svartholm was employed as a programmer for a security consultancy on a one-year assignment in Mexico City, when he volunteered to assist a Swedish file-sharing advocacy group called Piratbryan set up its own BitTorrent tracker. Svartholm's spare bit of caseless hardware was not intended to be extraordinary, it was simply meant to be a specifically Swedish site.

"He chose the name Pirate Bay to make clear what the site was there for: No shame, no subtlety. These people were pirates. They believed the existing copyright regime was a broken artefact of a pre-digital age, the gristle of a rotting model that poisoned culture and creativity. The Pirate Bay did not respect intellectual property law, and they said this publicly.

"It didn't take much for the nascent piracy site to saturate its 512-Kbps pipe, and for Svartholm's employers, the owners of the radio link, to start complaining about the new, unauthorised and unexpected use. It was in 2004 that Fredrik Neij became involved after Svartholm moved the tracker to Sweden and put it on a more robust connection. Peter joined shortly after to help grow and translate the site.

"For Peter, the project returned him to his formative years. As a child his mother had taken ill, and the responsibilities of caring for her consumed his life. After he dropped out of school, he found the only place he could be a kid, and socialise as one, was Sweden's vibrant bulletin board and demo scene.

Downloading doesn't require users to register or install spyware - if one has BitTorrent client installed, anything listed is **just a click away**.

To international observers, the Pirate Bay's defiant immunity from copyright lawyers is somewhat baffling. But in Sweden, the site is more than just an electronic speak-easy: It's the flagship of a national file-sharing movement that is generating an intense national debate, and has even spawned a **pro-privacy political party** making a credible bid for seats in the Swedish Parliament.

"The modem was a lifeline for Peter, and he says he didn't understand for many years that much of what transpired on the boards -- swapping files, talk about hacking, and cracking copy-protected software -- were becoming serious crimes.

"That this world of file-sharing and knowledge-sharing could be seen as a prosecutable wrongdoing was a shock to his system, he says -- one that today forms his certitude that copyright enforcement is an assault on expression itself. 'There is no cause closer to my heart, Peter notes. 'This is my crusade.'

"As Peter worked to grow the site, Mikael Viborg became the Bay's legal advisor, explaining Swedish IP law to the crew over IRC. It was Viborg's legal advice that led to the Bay's first defining feature: a rash of threatening letters sent in by lawyers for movie studios, video-game makers and other rights holders, side-by-side with the crew's mocking replies. For Peter, that's when Pirate Bay became part of a movement, and Neij is still obviously proud of the effort. 'They are rude in a polite way,' he says. 'We are rude in a rude way back to them.'

"In the meantime, big media's method of polite rude was working in the rest of the world. The U.S. Supreme Court was reviewing the legality of file-sharing networks like Grokster and Morpheus, and would eventually rule against them. Challenges to copyright term extensions failed, the RIAA was suing file sharers by the thousands, and rights holder groups were pushing an aggressive public education campaign, equating file sharing to stealing. Impassioned pleas from movie makers and musical artists greeted a public that was increasingly getting the idea -- even if they didn't stop downloading, they were at least beginning to feel guilty about it.

"Against this backdrop, the Pirate Bay crested the world of file sharing through attrition. One by one, most of the peer-to-peer networks went away. BitTorrent tracker search engines fell next - sites like Supernova.org and Elite Torrents crumbled under legal threats and raids. The remaining few, including Isohunt and TorrentSpy, now have policies of removing torrents for infringing content upon request. They are being sued anyway.

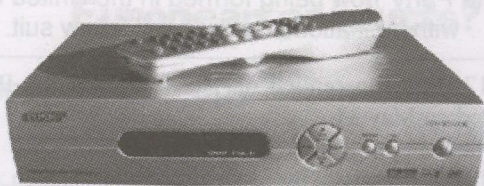
"That leaves Pirate Bay as the lone civil dissenter. It neither operates in a black market nor lays claim to a loophole in international law. Like its progenitor organisation, Piratbyran, the administrators of the Pirate Bay believe the law is wrong. Pirate Bay's buried treasure

"Alas, the attention it has garnered as a surviving piracy hub has not always been good for the Pirate Bay, or its opponents, and both sides have recently been dogged by scandal in the glare of Sweden's media spotlight, tugging the sympathies of the Swedish population back and forth.

"Pirate Bay's jaunty image was blemished by a July report appearing in the Swedish daily, Svenska Dagbladet, which revealed the site's hidden financial life for the first time. Posing as an Internet firm seeking advertising on the Bay, the paper revealed the site has around US\$84,000 in advertising

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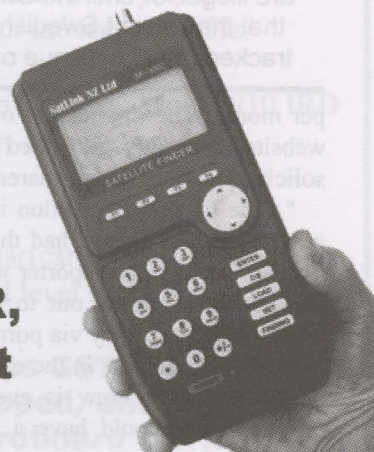


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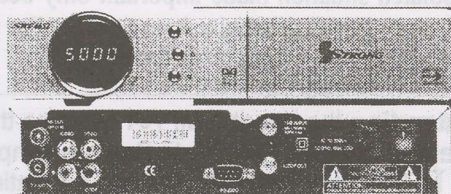
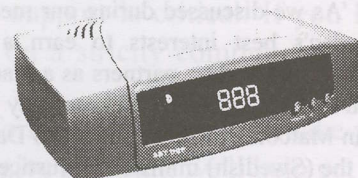
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Viborg credits The Pirate Bay's seeming immunity to the basic structure of the BitTorrent protocol. The site's Stockholm-based servers provide only torrent files, which by themselves contain no copyright(ed) data - merely pointers to sources of the content. That makes

The Pirate Bay's activities perfectly legal under Swedish statutory and case law. Viborg claims, "Until the law is changed so that it is clear that the trackers are illegal, or until the Swedish Supreme Court rules that the current Swedish copyright actually outlaws trackers, we'll continue our activities. **Relentlessly.**"

per month. The implication of the report was quite clear -- a website ostensibly dedicated to a selfless ideal, and which solicits donations, was apparently turning a tidy profit.

"The general perception is that they are doing something good -- they've always had this image, very ideological,' says Tobias Brandel, the reporter who broke the story. If the Pirate Bay ultimately turns out to be a collection of businessmen profiting off of piracy via porn ads and on-line poker, it would lose popular support in the moralistic Swedish society. And if the Pirate Bay's crew is eventually convicted of copyright crimes, 'they could have a much harder punishment,' adds Brandel.

"Scandinavia (Sweden, Norway, Denmark) accounts for around 35% of all Pirate Bay traffic, according to Peter. It's unclear how much additional money the site makes on ads sold elsewhere. And no one is saying where the ad money goes. Donations and profits from T-shirt sales go to Pirathbyran, but ad sales do not. Peter declines to say more, on advice of the Pirate Bay's defence counsel.

"The Pirate Bay's enemies might rejoice over the recent national controversy, if some were not embroiled in a scandal of their own, centred on U.S.- led lobbying efforts that preceded the May Pirate Bay raid.

"As background, the Swedish constitution erects a legal wall between politicians and law enforcement. The politicians can tell police what issues to emphasise, but not what causes to pursue. So questions emerged in June when leaked documents appeared in the Swedish media showing entertainment lobbyists with the MPA -- the international arm of the American MPAA -- had explicitly pushed for political interference; police action.

"As we discussed during our meeting, it is certainly not in Sweden's best interests to earn a reputation among other nations and trading partners as a place where utter lawlessness with respect to intellectual property rights is tolerated,' MPA's John Malcolm wrote in a letter to Dan Eliasson, state secretary for the (Swedish) minister for justice. 'I urge you once again to exercise your influence to urge law enforcement authorities in Sweden to take much-needed actions against The Pirate Bay.'

"The minister's office denies that it acted on the MPA's request, which would constitute the Swedish crime of 'ministertype.' Law enforcement officials have agreed they were not subject to political pressure. But the timing of the raid is raising eyebrows. The letter from Malcolm is dated

The Pirate Bay today boasts **1 million unique visitors** a day and the site receives 1,000 to 2,000 HTTP requests per second on each of its four servers. When the MPAA closed down other torrent sites such as SuperNova, users crowded onto surviving sites like pelicans on a reef.

Vote Pirate? Supporters of The Pirate Bay have created a new Swedish political party ('Pirate Party') rapidly gaining sufficient signatures to place the new political party on general election ballots. Estimates of more than 1.2 million over-18s in the country who practice file sharing suggests the potential to achieve the minimum (4%, 225,000 votes) to place at least one supporter onto the floor of Parliament. The example of the group's success to date has created a copycat 'Pirate Party' now being formed in the United States with indications Canada will follow suit.

March 17. Eliasson replied on April 11, and the Pirate Bay was raided on May 31.

"Whether politically compelled or not, the raid was undeniably aggressive. Swedish prosecutor Hakan Roswall; directed police to seize nearly 200 servers -- everything at three locations of Svartholm's and Neij's ISP business, prq.se. The forensic work required to get through the terrabytes of seized data isn't expected to be complete before December.

"Once the evidence has been analysed, the pirates will face an uphill court battle, predicts legal researcher Viveca Still, a faculty member of the Institute of International Economic Law in Helsinki. 'Pirate Bay is likely to be held liable for secondary copyright infringement,' she says. 'A good indication is a recent court decision in Norway, according to which linking to illegal content was contributory infringement.' Swedish courts have the ability to cite Norwegian precedent.

If elected, the Pirate Party promises to strengthen Swedish privacy protections, weaken copyright laws, abolish the EU Data Retention Directive and rollback government surveillance legislation.

"File sharing is the library of today and they want to take that away from us and make us start paying for every single thing that we go to the model library to get.

People have become used to having this library available and if they take the applications away from us they will take away the basic tools that people think have become normal."

"But, as the case unfolds, there is nothing preventing the Pirate Bay from continuing -- the raid was the evidence gathering mission only, there is no court order against the site. That leaves it far from clear that the courts will shutter The Pirate Bay, before the invisible march of technology does the job itself. Once a charge is filed, it could be many months before the trial starts. Appeals in the Swedish legal system aren't likely to be exhausted for three to five years after that.

And by then BitTorrent will no longer be the prime mover of pirated content on-line, says Neij. 'The Pirate Bay will outlive its usefulness.' "

Note: The 'Pirate Bay' story is obviously not over, a tale in progress. Sweden's handling of Internet copyright remains an abstract and isolated situation made important only because it is a developed country with otherwise in-sync laws. For now, it is an idolised example of a will to be different.

Notwithstanding the debate, MPAA believes those who use and operate The Pirate Bay are simply thieves. MPAA says, "we will continue educating people about the consequences of piracy." Pirate Bay's response: "We are *a/so* educating people - **by teaching them how to do it!**"

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Slingbox? Sony Location-Free? TV2Me?

Sony products have a nasty tendency to get involved with serious legal battles, the most famous and important one was the 1984 BETAMAX case. For this epic battle, Sony firmly stood up and did not bend its knees against the almighty Hollywood bullies. And because of this final victory, consumers all over the world could buy up millions of VTRs, DVD gear, hard disk recorders and eventually i-PODs as well.

This year's case was not so noisy; Sony is just a side-player, *this time*.

Tokyo District Court has quietly dismissed an application for provisional disposition. The national public TV channel, NHK, and 5 other TV biggies, had applied to the court to suspend a service known in Japan as 'ManekiTV,' operated by Japanese firm Nagano-Shouten (Tokyo).

ManekiTV is a service firm that sits between consumers purchasing the Sony Location-Free TV and programmers. After spending (US)\$228 for the device, it is taken to ManekiTV which places it into a 'TV Hotel' for (US)\$44 per month. A TV Hotel?

ManekiTV provides two connections for the consumer: One is to an aerial, cable TV, or a satellite dish. That's the input side. On the output end, ManekiTV has high speed fibre optic lines in abundance. Think of an air conditioned, power-side protected, room filled with hundreds/thousands of Sony Location Free boxes each of which is actually owned by a different individual (or family). Each box has its own physical broadband/fibre telephone number and when the owner of the box is away from home, they broadband-connect to their own box through their own number and operate the box by remote control. Whatever the box is authorised to receive (a choice determined by aerial, cable, or satellite) is then fed back by the Sony receptor through the world's telephone circuits to the travelling owner.

Sony's box is simply a remote control access device, doing the same thing as the American bred Slingbox or the original in this industry, TV2Me. Some people have even augmented their personal systems by connecting to their home DVD player or tape machine or TiVO-like device.

The Japanese TV networks brought suit against ManekiTV claiming (one guess only!) - copyright violation. The TV stations perhaps believed it would be a faster route to a court decision by bringing the action on ManekiTV rather than against one or 100 or 1,000 Japanese equivalents to John Doe - unnamed users of Sony Location-Free who actually keep their Location-Free base station at their own home (obviously another choice to ManekiTV).

The TV stations have lost the first round of this battle which is sure to escalate. First, why they lost. The court found the service involves individual Sony boxes, each owned by a different party, each receiving programming which is authorised for that party's reception and -most important- in theory the box housed "as a convenience" at the facility of ManekiTV can only be accessed by its owner. The system

does not "broad"cast, it "narrow"links. The box owner is simply operating his "home TV" by remote control. Naturally the Japanese TV stations did not like this decision, in favour of ManekiTV (and its customers).

The "TV Hotel" concept is in fact not limited to Tokyo's ManekiTV. Similar if not identical service firms have sprung up in London, San Francisco and a Hong Kong based company that specialises in providing horse/dog racing services on a planet-wide basis actually has an IPO (initial public offering) nearing completion based upon a large scale expansion of the concept world-wide. "TV Hotels" are quite suddenly the latest "Gee-Whiz! Look at that!!!" magnet attracting high-risk investment dollars from a wide swatch of investors.

The mechanics are not that complex. The equivalent of a RF broadband cable TV system is designed, fed by individual satellite receivers, off-air antennas, in one Gibraltar case by the cable company itself. Space is dedicated to house the Sony (or Slingbox) devices, each is given a "hotel room" (enough shelf space for the Sony or Slingbox to reside) and access through a well located fibre optic trunk to the outside world. In London, the monthly fee is offered in levels - the 'economy connection' for aerial connection linking (using Freeview as a source) rising up to include for more-pounds-per-month access to a full compliment of BSkyB channels with one or more TiVO remotely controlled recording devices attached. In Tokyo, ManekiTV already has competition (Dokodemo Vision which means "Anywhere TV"), and J-Net which serves as a Japanese agency for American-housed Slingboxes. J-Net has taken the next step in the concept. You may live in Tokyo or elsewhere and you wish access full-time to American TV - say from Los Angeles. Using the "TV Hotel" plan they sell you an American Slingbox, and place it in a location where Los Angeles TV is available (at their TV Hotel). For a set fee per month, the customer has direct fibre optic access to their US housed Slingbox - overlooking the fact they are not Americans, do not live in America, and perhaps have never even been there.

Like any competitive business, the next stage is already appearing. J-Net figures there is a market for American sourced movies - the kind you might normally rent from the corner video shop. The TV Hotel operator provides a rental DVD player, wired into the customer's normal Slingbox system, and on instruction inserts the DVD movie the customer has chosen. You can work out the next level of this one!

The weakness in all of this, other than the anger this is creating with TV broadcasters and program rights owners, remains the barely acceptable level of quality which Sony or Slingbox provide - shortcomings of their respective device designs and of course the totally unpredictable nature of the connection through Internet to a distant point. Alas, while Tokyo District Court may have been first to rule on this business activity, it is but the first round in a new battle.

SatFACTS Pacific/Asian MPEG-2 Digital Watch: 15 OCT, 2006

Bird	Service	RF/IF &Polarity	# Program Channels	FEC	Msym
Them5/78.5	SkyChAust	3695/1455H	up to 3	3/4	5(000)
	ANT Greece	3672/1478H	1 TV	3/4	13(333)
	TARBS ME mux	3640/1510H	12TV, 12 radio	2/3	28(066)
	Ch Nepal	3626/1524V	1	3/4	15(556)
	Mahar mux	3600/1550H	11TV, 1 rad	3/4	26(667)
	RR Sat mux	3551/1600H	8TV, 10 radio	3/4	13(333)
	TVK Cambodia	3448/1702H	1TV	1/2	6(312)
	TARBS/Th5	3480/1670H	12 TV+radio	2/3	26(667)
	Thai Global	3425/1725V	up to 7?	2/3	27(500)
InSat 2E/83	ETV mux	4005/1145V	6+ TV	3/4	27(000)
	Hyd Dig 2E	3910/1240V	1	3/4	5(000)
	Kairali TV	3699/1451V	1	3/4	3(184)
	Indian mux	3643/1507V	3	3/4	19(531)
	Sky Bangla	3430/1720V	1TV	3/4	6(000)
NSS6/95E	Ant Pac (Greek)	11.104H-Australia	1 TV	3/4	2(800)
As2/100.5E	Guangdong TV	4075/1075H	1TV + radio	3/4	6(000)
	Euro Bougt	4000/1150H	5TV, 19 radio	3/4	28(125)
	SatLink	3960/1190H	3TV	3/4	27(500)
	Reuters News	3905/1245H	1TV	3/4	4(000)
	WorldNet	3880/1270H	4+18radio	1/2	20(400)
	APTN Asia	3799/1351H	1	3/4	5(632)
	Reuters/Sing	3775/1375H	1	3/4	5(631)
	Macau MUX	4148/1002V	5TV	3/4	11(850)
	Dubai MUX	4020/1430V	4+ radio	3/4	27(500)
	Russian/Israel	3832/1318V	up to 4 video	3/4	7(271)
	ArabSat#2	3820/1330V	8+ video?	3/4	27.5
	Trace TV	3792/1358V	1	3/4	2(400)
	BYU-TV	3767/1383V	1 + 20 audio	1/2	6(530)
	3-ch miniMUX	3752/1398V	up to 3	3/4	5(640)
	Saudi TV1	3660/1490V	7+tests	3/4	27(500)
Express2/103E	Various-tests	3675/1475R	2	3/4	4(340)
As3S/105E	Chinese regionals	3671/1471V	2	3/4	8(932)
	CETV digital	3680/1470H	1+ TV	3/4	26(670)
	Zee bouquet	3700/1450V	10TV	3/4	27(500)
	Ch News Asia	3706/1444H	1TV (+)	3/4	6(000)
	Azio TV	3716/1434H	1TV (+)	3/4	7(000)
	BTV World	3725/1425V	1TV	3/4	4(450)
	TVB 8	3729/1421H	1TV	3/4	13(650)
	Zee Movies	3732/1418V	3TV	3/4	6(500)
	TV One	3739/1411V	1TV	3/4	2(8934)
	SAB TV	3743/2407V	1TV	3/4	3(300)
	Fashion TV	3747/1403V	1TV	3/4	2(625)
	AAJ-TV	3750/1400V	1TV	3/4	2(820)
	Airrang TV	3755/1395V	1	7/8	4(418)
	Now TV +	3760/1390H	up to 10TV	7/8	26(000)
	Star TV	3780/1370V	7(+)-TV	3/4	28(100)
	GXTV	3806/1344V	1TV + 3 radio	3/4	4(420)
	Shaanxi TV	3813/1337V	1TV + 2 radio	3/4	4(420)
	Anhui TV	3820/1330V	1TV + 2 radio	3/4	4(420)
	Jiangsu TV	3827/1330V	1TV + 2 radio	3/4	4(420)
	HLITV	3834/1316V	1TV	3/4	4(420)
	Star TV	3840/1310H	7(+)-TV	7/8	26(850)
	Star TV	3860/1290V	5(+)-TV	3/4	27(500)
	Dragon TV	3886/1264V	1 TV	3/4	4(800)
	Shaandong	3895/1255V	1TV + 6 radio	3/4	6(813)
	CCTV1	3904/1246V	1TV, 1 radio	7/8	4(420)
	Jilin TV	3914/1236V	1TV + 2 radio	3/4	4(420)
	Star TV	3920/1230H	4+ TV	7/8	26(850)
	CNN	3960/1190H	8TV, 1 radio	3/4	27(500)
	StarTV	3980/1170V	6+TV	3/4	28(100)
	Star TV	4000/1150H	8(+)-TV	7/8	26(850)
	Sahara digital	4020/1130V	8TV, 1 radio	3/4	27(250)
	Hubei TV	4035/1115H	1TV + 2 radio	3/4	4(420)
	Tianjin TV	4046/1104V	1TV + 2 radio	3/4	5(950)
	Sichuan TV	4051/1099H	1TV + 1 radio	3/4	4(420)
	Qinghai TV	4067/1083H	1TV + 2 radio	3/4	4(420)
	Hunan TV	4082/1068H	1TV + 1 radio	3/4	4(420)
	Fashion/HK-Asia	4088/1062H	1TV	3/4	2(626)
	Pakistani TV	4091/1059V	4TV, 1 radio	3/4	9(330)
	Sun TV	4095/1055H	1	3/4	5(554)
	PTV National	4106/1044V	1TV, 1 radio	3/4	3(333)
	TVB8 Mux	4111/1040H	4 TV	3/4	13(650)
	Indus News	4115/1035V	1	3/4	3(331)
	CCTV bqt	4129/1021H	4 TV, 4 radio	3/4	13(240)
	Zee Bqt #2	4140/1010V	8(+)-TV	3/4	27(500)
	Henan TV	4166/984V	1TV + 8 radio	3/4	4(420)
	Fujian TV	4180/970V	1TV + 2 radio	3/4	4(420)
	Jiangxi TV	4187/963V	1TV + 2 radio	3/4	4(420)
	Liaoning TV	4194/956V	1TV + 2 radio	3/4	4(420)
Cak1/107.5	Indovision (S-band)	2.535, 2.565, 2.595, 2.625, 2.655	33(+)-TV	7/8	20(000)
T'Kom/108E	IndoBqt	3460/1690H	up to 6	3/4	28(000)
C2M/113E	TPI	4185/965V	1	3/4	6(700)
	Anteve	4144/1006V	1	3/4	6(510)
	Kabelvision Mux	4080/1070H	7+ TV	7/8	28(125)
	Indostar	4074/1076V	1	3/4	6(500)
	SCTV	3934/1216H	1	3/4	6(620)
	Indo MUX	3880/1270H	3+ TV	7/8	28(121)
	TVRI	3765/1385H	1TV	3/4	5(555)

Receivers and Errata

CA (#1, 3); FTA audio #2
Late July 04: room for more (FTA)
CA + 23FTA(A1TV, IRB3, Vision Norge, Pakistan)
New 03/03; FTA
Thai + Indian services; FTA inc. Vibe TV, Sindh TV
3TV, 5radio inc. Hellas TV Greece FTA
FTA
3FTA: TV5, VTV4, ATN Bangla
FTA (reaches SE Australia)
Several ETV now here; wide beam
SCPC, OK E. Aust. wide beam
SCPC, OK E. Aust wide beam
corrections 12/02
New - November 2002
Now CA, was 11 083H
July 04: FTA
FTA TV + radio; Russia,Port,Spain, Italy/Euro Bqr
Real Madrid (V769, A770) English FTA
Was 3923H, sometimes FTA
FTA; multiple audio services V2360, A2320
Sometimes FTA; also 3895Vt
FTA & CA
5 chs TV, FTA, some tests
FTA ; Dubai Sports Ch some English, soccer-
Two Israel, two Russian (REN-TV)
New 107-06; initially parallel As3S 3.880H
new here Dec 2004; Euro-French music videos
Increased coverage; great variety audio chs(03-05)
Sun-TV, Surya TV, KTV, (FTA)
FTA MCPC; Yemen, MBC EUROsport tests
Now loaded from 96.5E; svrl below 3900 all RHC
New 07-06; Yambian, Jilin Satellite TV
replaces analogue same freq; V33, A32
Now SECA 2 CA (10-04); Radio Aust. Eng. A201 I
English + V1160, A1120; 525, 625 versions
Was parallel to 3640Hz analogue (now gone)
Conax CA, all Hindi films
Also reported 3.333, 1/4 October 2005
SAB may no longer here here; moved to NSS-6?
new frequency October 2005
New April 2005; English, urdu
FTA SCPC; New PIDs V3601, A3606 June 2003
CA + FTA; DW, TV5 here now (late 2005)
NDS CA (Pace DVS211, Zenith)
Guangxi TV, was As2
Was As2
Was As2
Was As2; HeiLong
NDS CA (Pace DVS211, Zenith)
NDS CA (Pace DVS211, Zenith)
Shanghai
Apparently Mongolia
PowVu CA; new SR Apr 29; CNN radio FTA
NDS CA; Star News India FTA VPID 514, APID 648
NDS CA w/ 4(Chinese) FTA
New Sr September 2004
Was As2
new December 2004
Was As2
Was As2
Was As2
New July 2005
new Sr, channels, April 2006
"History Channel" - SCPC, some English
MATV Ch Movies now Irdeto 1
Hindi (+ "Plus"); day parts
moved from 4115
Now SECA 2 CA (10-04); 1 occ. FTA (varies)
Was As2
Was As2
Was As2
Was As2
NDS CA using RCA/Thomson,
Pace IRDs; 2.535 has 2 FTA. Bird now inclined
also 3586H/17.500, 3496H/19.615
FTA SCPC, NT/NC only
change from 4055V; FTA SCPC
also try 3500H, 27.000, 3/4; strong NZ
New (but probably temporary) 07-06
FTA, may not be active full time
FTA; Sr change 01/03; erratic
bounces btwn FTA and CA; unreliable (12-04)

Bird	Service	RF/IF & Polarity	# Program Channels	FEC	Msym
	SCTV	3726/1424V	1TV	3/4	6(620)
	RCTI	3473/1677H	2	3/4	8(000)
As4/122E	CCTV internal	4100/1050V	6	3/4	27(500)
Jc3/128	Miracle Net	3996/1154V	3 up to 6	5/6	22(000)
	Asian bgt	3960/1190V	up to 8	7/8	30(000)
Ap6134E	Multiple	4140/1010V	up to 8	7/8	27(500)
T18/138	Tests	3460/1690V	8	3/4	30(000)
Am3/140	STS +	3731/1419R	1	3/4	3(200)
Jc2A 154	BYU-TV	3915/1245V	1+20 languages	3/4	4(166) (?)
MeasSs2	Astro Mux	11.602H	up to 17TV	3/4	41(500)
	VTV MUX	11.522V	3 TV	3/4	9(766)
B3/152	7 Cent. Feed	12.310H	1TV	3/4	5(100)
	AuroraBiz	12.407V	4 TV, 10 radio	2/3	30(000)
	UBI	12.425V	up to 13 TV + radio	3/4	22(500)
	Globecast 2	12.525V	13 TV, 8 radio	2/3	30(000)
	Globecast (feeds)	12.550-555V	1TV	3/4 & 2/3	6(110/670)
	Globecast	12.564V/T13	2+ TV	2/3	30(000)
	UBI	12.613H/T14L	11+TV	3/4	22(500)
	UBI	12.640H/T14U	11+TV	3/4	22(500)
	Globecast 1	12.658V/T7	14TV, 15 radio	2/3	30(000)
	UBI	12.674H/T15L	11+TV	3/4	22(500)
	UBI	12.701H/T15U	11+TV	3/4	22(500)
	WA ABC	12.702V	1 TV, 1 radio	7/8	14(288)
	WA SBS	12.720V	4TV, 2 radio	5/6	12(600)
	WA GWN/WIN	12.738V	2TV	7/8	14(295)
C1/156E	Aurora	12.324V/T1U			
	Pay TV	12.365V/T2	11TV, 2 radio	3/4	27(800)
	Aurora Home	12.407V/T3	5 TV, 13 radio	2/3	30(000)
	Pay-TV	12.447V/T4	5TV, 4 data	3/4	27(800)
	Pay TV	12.487V/T5	3+ TV, data	3/4	27(800)
	Aurora 2	12.527V/T6	7TV, 20 radio	3/4	30(000)
	Pay-TV	12.567V/T7	10 TV	3/4	27(800)
	Pay-TV	12.607V/T8	10 TV	3/4	27(800)
	Pay-TV	12.647V/T9	10 TV	3/4	27(800)
	Pay-TV	12.692V/T10L	6TV, 27 radio	1/2	28(650)
	Aurora MUX	12.728V/T10U	4TV, 17 radio	1/2	24(450)
	Austar	12.305H/T11	6TV, 24 data	3/4	30(000)
	Pay-TV	12.358H/T12	10 TV	3/4	27(800)
	Pay-TV	12.398H/T13	10 TV	3/4	27(800)
	Pay-TV	12.438H/T14	6TV, 3 data	3/4	27(800)
	Pay-TV	12.478H/T15	10 TV	3/4	27(800)
	Pay-TV	12.518H/T16	10 TV	3/4	27(800)
	Pay-TV	12.558H/T17	10 TV	3/4	27(800)
	Pay TV	12.598H/T18	10 TV	3/4	27(800)
	Pay-TV	12.638H/T19	10TV, 30 radio	3/4	27(800)
	Pay TV	12.688H/T20	11TV	3/4	27(800)
B1/160	Central 7	12.365H	1 TV, 1 radio	3/4	6(100)
	Occ. feeds	12.384V	1 TV *	3/4	6(111)
	Imparja mx	12.379H	2TV + 8 radio	3/4	5(424)
	7 digital feeds	12.397H	1TV	3/4	7(200)
	Feeds to NZ	12.411V	1 TV	3/4	6(111)
	SBS Mux	12.420H	3+ TV, 2+ radio	5/6	12(600)
	TVNZ Tests	12.483V	up to 8TV	3/4	22(500)
	Sky NZ	12.519/546V	7TV/7TV	3/4	22(500)
	Sky NZ	12.581/608V	6TV/6TV	3/4	22(500)
	Sky NZ	12.644/671V	9TV	3/4	22(500)
	ABC western	12.610H	5TV	7/8	14(3288)
	Sky NZ	12.707/734V	8+TV	3/4	22(500)
P8/166E	SelecTV	12.526H	8+TV	3/4	28(800)
	CCTV	12.557H	3+TV	3/4	13(240)
	ABS-CBN	12.575H	4+TV, 4+ radio	2/3	13(845)
	MYSAT	12.646H	up to 8 TV	3/4	28(066)
	JED1/TVB	12.686H	11+ TV	3/4	28(126)
	PnGlobal Aust	12.726H	6+TV	3/4	28(066)
	ABC A-P	4180/970H	2TV, 2 radio	3/4	27(500)
	Disney Pac	4140/1010H	typ 6 TV	5/6	28(125)
	Taiwanese MUX	4080/1070H	12+ TV	5/6	30(000)
	NHK Joho	4060/1090H	7TV, 1 radio	1/2	16(180)
	FOX Mux	4040/1110V	up to 5TV	7/8	26(470)
	NET +	4121/1029V	1 TV	3/4	4(774)
	ESPN USA	4020/1130H	8+TV, data	3/4	26(470)
	Discovery	3980/1170H	8 typ.	3/4	27(690)
	CalBqt/Pas8	3940/1210H	up to 3+ FTA	7/8	27(690)
	CNBC HK	3900/1250H	up to 7TV	3/4	27(500)
	FilipinoMUX	3880/1270V	up to 8TV+radio	5/6	28(694)
	TaiwanBqt	3860/1290H	12TV + 30 r	5/6	28(000)
	CCTV Mux	3829/1321H	up to 4 + 1 radio	3/4	13(240)
	TVBS-N	3836/1314V	1FTA, 4+ CA	3/4	17(500)
	EMTV PNG	3808/1342V	1 + 2 radio	3/4	5(632)
	CNNI	3780/1370H	3, up to 5 TV	3/4	25(000)
	Discovery Asia	3764/1386V	Up to 6 TV	3/4	19(850)
	MTV	3740/1410H	8	2/3	27(500)
P2/169E	WA Mux Pv	12.281V	3+ TV, radio	2/3	27(500)
	Ariang TV	12.401V	1TV	3/4	4(400)
	ABS-CBN	12.575H	4TV, 2 radio	2/3	13(845)
	Test mux	12.715H	6+ TV	2/3	30(000)
	TARBS feeds	4090V/1060V	9TV + radio	3/4	21(000)
	BBC India	3915/1235V	1TV	3/4	6(620)
	BBC SCPC	3986/1164H	1TV	1/2	5(700)
	Middle East	3836/1314V	4 typ	3/4	13(331)

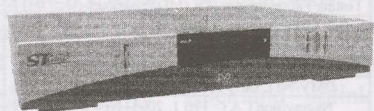
Receivers and Errata

was on 4048V; New Caledonia, parts of Australia
 FTA SCPC; or, 3774H, 6.520, 3/4 (June 06)
 Irdeto 2; 4060V HDTV CA; also try 4020V
 PowerVu; some FTA (Ch. 1 & 3)
 CA & FTA NTSC: Japan, Taiwan
 (ApStar 6: also 4180V same #s; some analogue also)
 also try 3660/3540V/Vt, Sr 30.000, 3/4; some FTA
 North beam; also try 3875R, 12.475, 1/2
 Strong NZ & Australia, may now be 1/2, 6.525
 Aust East beam - 3 FTA + 14 CA
 WA only? Skew path, intended Asia
 Was B1; moved June 2006, concerns B1 failures
 differs from 12.407 C1; tune ch FTA; NZ+Au
 Now Irdeto V2
 NZ + Au, FTA + Mcrypt CA
 occ feeds, NZ + Au; recently 12.553V
 AMTV, Healing only FTA svcs now here
 High performance beam; not NZ; new CA 07-06
 High performance beam; not NZ; new CA 07-06
 NZ + Au (Mcrypt, PowVu capable)
 High performance beam; not NZ; new CA 07-06
 High performance beam; not NZ; new CA 07-06
 ABC WA tests, FTA
 SBS, radio tests WA FTA
 Irdeto V2 CA, tests (GWN, WIN)
 not currently in use
 Tests; SBS-NDS CA, others FTA when here
 NZ (90cm) + Australia (Only C1 svc left on NZ)
 Australia NA only (leakage to Norfolk, New Cal)
 Australia NA only (leakage); 9-Net x 3 widescreen
 Arrow radio (still here), tone FTA
 Pay-per-view movies; CA
 Pay-per-view movies; CA
 Pay-per-view movies; CA
 ABC for Foxtel/Austar; previously 12.288V
 changes September 2005
 Austar inter; Expo FTA
 NDS CA + Mcrypt; CA
 CA, subscriptions available Australia, Norfolk
 Sky News active; 'Help x 2' FTA
 CA, subscriptions avail Au, Nrlk; TVSN FTA
 CA, subscriptions available Australia, Norfolk
 "Home" CA, subscription available Australia, Nrlk
 CA, subscriptions available Australia, Norfolk
 CA, subscription available Australia, Norfolk
 CA, subscription available Australia, Norfolk
 also reported B3, 12.310H
 * - plus 12.293V, 402V, 411V, 451, 460H
 PIDs vary; also try 12.360, 12.370
 occ. digital feeds; typ fta
 Often NTSC; USA-Australia-NZ
 Also 12.437H, 12.456H same params; HDTV+WS
 (12.456 now shut down); 16:9 added late July
 NDS CA, subscription available NZ
 NDS CA, subscription available NZ
 NDS CA, subscription available NZ
 also see 12.610, 626, 643, 670, 688, & 706H
 NDS CA, subscriptions available NZ
 & 12.286, 12.326; FTA prev. 526 V10112, A1012
 FTA-Australia
 CA -Australia
 FTA V-5340, A-790 -Australia
 June 2002-Irdeto-2 CA - Australia
 Some FTA-Australia
 Dateline west; also east PAS2, 3901V
 PowVu CA
 Tests - CA service announced
 PowVu CA & FTA; sub available-changes 05-06
 was PAS-2, previously 3992Vt; feeds FTA
 NET25 + FTA; new PIDS April '03; reload
 PowVu CA; ch 11 DCP-CCP bootload; audio FTA
 PowVu/CA (some audio FTA)
 PowVu CA & FTA (EWTN + CBS + TBN +)
 NDS CA (6 channels); one test card occ FTA
 Myx FTA V1960, A1920 + radio FTA
 Mixed FTA & CA; STC gone (CA)
 PowVu FTA, replaces PAS-2 svc
 CCTV cross pole, new SR 04-06
 PowVu CA
 PowerVu; some audio FTA
 PowerVu; Asian MUX; new parameters Nov '03
 # 8 MTV China FTA V289, A290; rest CA
 PowVu CA, WIN, ABC NT, SBS; status unknown
 Test - may not stay permanently
 Temp FTA; subs Aust 011-800-2270-0722
 initially with 6 NTSC colour bars
 Occ FTA (Chile +); BIG power reduction Nov 03
 Started 07-06; India test service
 BBC World moved here January 2005
 Subscriptions available; Strong Technology

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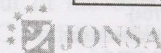
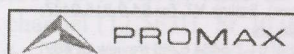
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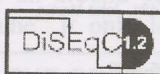
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Bird	Service	RF/IF & Polarity	# Program Channels	FEC	Msym
(PAS2/169E)	Adventists.tv	4040/1010H	1	2/3	5(900)
	Feeds	3868/1182H	1	2/3	6(620)
	Feeds	3939/1211H	2 (typ NTSC)	2/3	6(620)/7(498)
	Cal PowVu	3901/1249H	up to 8	3/4	30(800)
	HK bouquet	3850/1300H	up to 8	2/3	24(900)
	Korean Bgt	3771/1379H	1	3/4	6(510)
AMC23/172E	Various-tests	12.730H	up to 8	3/4	30(000)
1804/174E	iPSTAR	12.619H	1	2/3	25(220)
	Tests-NZ beam	12.646H	1	3/4	22(418)
	RFO Poly	4027/1123R	1TV	3/4	4(566)
1701/180E	TNTV	11.060&11.514V	9	3/4	30(000)
	TVRFO	11.136V, 11.174V	6+TV, 3+ radio	3/4	23(149)
	Canal+Sat	11.610H	16TV, 1 radio	3/4	30(000)
	PBS	12.648HH	16TV possible	3/4	28(066)
	TVNZ/BBC	4186/964RHC	1	3/4	5(632)
	TVNZ	4178/972RHC	1	3/4	5(632)
	AFRTS DTS	4175/975L	3 TV, 3 radio	2/3	3(680)
	TVNZ/Aptn	4170/980RHC	1	3/4	5(632)
	Fiji Sky Pacific	4095/1055LHC	6TV + future radio	3/4	16(505)
	Fiji Sky Pacific	4055/1095LHC	7TV + future radio	3/4	16(505)
	TVNZ/feeds	4052/1098RHC	1	3/4	5(632)
	TVNZ feeds	4044/1106R	1	3/4	5(632)
	NBC to 7 Oz	3960/1190R	1	7/8	6(447)
	TBN Mux	3927/1223R	4TV	2/3	11(394)
	WorldNet	3886/1264R	1TV, 37 radio	3/4	25(000)
	Ioarana	3772/1378L	1	3/4	4(566)
	NASA TV	3854/1296R	1 TV	3/4	2(000)
	TVNZ	3846/1304R	1	3/4	5(632)
	NBA (Barker) Ch	3803/1347R	1	3/4	6(111)
	USA feeds	3749/1401R	4?	?	26(400)
NSS-5/177W	Pacific IP Data	3763/1387R	none-data	3/4	27(500)
	RFO/Tempo	3920/1230R	1	3/4	2(893)
	BYU-TV	4185/965R	1TV, 20+ audio	1/2	6(525)
	Australia Temp.	12.522V	8 SCPC	7/8 & 5/6	14 294 & 12.600
	Auckland Teleport	12.612V	1 SCPC	3/4	5(789)
	iPSTAR Tests	12.691V	8 TV	5/6	17(600)

Receivers and Errata
New December 2003; 24/7 "Hope Chs."
FTA (occ sport), also try 3863, Sr6 100
FTA-typ NTSC-occ sport, live Shuttle
PowVu CA + FTA (includes BBC-W 05-05)
was 4148Vt; some FTA
Korean MUX, reload 12-04; new Sr
Testing on NZ/East Australia beam
Tests, late May start; also 12.646H
Testing possible data links, June 2003
SE spot beam; was 4027LHC
east spot; 10TV + r each, vertical pol
FTA 11.136 Tahitian beam, 11.174 west beam; 12/04
1+ FTA, MediaGd "2"; + 10.975 weaker
Testing Fiji region pay-TV (MDS) package (Oct '04)
DMV/NLT early vers. occ feeds, typ ca
DMV/NLT early vers., occ feeds, typ ca
DTS Direct to Sailors; audio previously FTA - gone
DMV/NLT early vers. occ feeds, typically ca
Nagravision CA (> Feb 1, 2005) New PIDS
All now (including Fiji 1) CA; 7 Feb, 2005)
DMV/NLT early vers., occ feeds, typ ca
SCPC, mixed CA and FTA feeds
CA, Leitch encoded
January 2006-now 4 channels, new Sr
New PIDs Dec 03 very strong NZ, Pacific
FTA SCPC, East Hemi Beam-Tahiti
24/7 live NASA - West Hemi beam (can be difficult!)
SCPC, mixed CA & FTA, feeds
NBA feeds - probably CA - new Nov 2003
16-QAM (not MPEG-2 compatible)
Data only but useful for dish alignment
Wallis & Futuna Island(s) service
Global beam - requires sizeable dish
Aust beam: 12.522, 538,555,574,604,621,639 & 657
NEW Sept 2006; MCPC coming; SPACE Tuesdays
CA Tests - Taiwan TV; data coming?? (NZ beam)

MPEG-2 DVB Receivers: (Data here believed accurate; we assume no responsibility for correctness!)

AV-COMM R3100 FTA, excellent sensitivity (review SF May 1998); new version Sept. '99. AV-COMM P/L, 61-2-9939-4377.

AV-COMM Tiny Tot FTA, 12Vdc operated, palm sized, low power consumption; review SF#120. Contact # above.

Coship 3188C Review SF#107. Blind search FTA rcvr; works well. Phoenix Technology Group (www.phoenixsatellite.com.au) (Irdeto 2 as well as FTA versions)

Coship FTA, CA, HDD Review SF#143, state of art functions, blind search. Phoenix (above), Satlink NZ, fax 64-9-814-9447.

Divitone: "Left-handed" review SF#115; does "code key" entry. Available <http://www.satmax.ws>

eMTech eM-100B (FTA), eM-200B (FTA + Ck2), eM210B (FTA + 2xCI + positioner); KanSat 61-7-5484 6246 (review SF#89)

eM-150/Homecast FTA + embedded multi-format, review SF#144. Sciteq (61-8-9409-6677) and Kristal (61-7-4728 7704)

Fortec Star Lifetime Two versions, both blind search, code-key programmable, one X 2 CI. Review SF#119. www.aDigitalLife.com

Homecast (em-150, eM-1150, eM-2150) series of FTA, CA, HDD state of art STBs, review SF#144. Sciteq (www.sciteq.com.au)

Humax ICR1 5400 (Z). Embedded Irdeto + 2 CAM slots; initial units had NTSC glitch, now fixed. Widely available; new software avail 04-04, SF#76.

Humax ICR1 5410 (Z). Adaptable version capable of holding multi-CA systems (SF#98, 99). Widely available; original importer Sciteq (www.sciteq.com.au).

Hyundai-TV/COM. HSS100B/G (Pacific), HSS-100C (China) FTA. Different software versions; 2.26/2.27 good performers, 3.11 and those with Nokia tuners also good; later 5.0 not good.

Hyundai HSS700 FTA, PowerVu, SCPC/MCPC. Review SF March 1999. Kristal Electronics, 61-7-4788-8902.

Hyundai HSS800CI FTA, Irdeto (with CAM) + other CA systems, PowerVu, NTSC. Kristal Electronics, above; review SF#63.

INNOVIA IDS3088 Review SF#111. Blind search FTA receiver. High quality IRD; available Phoenix TechnologyGroup, and Satmax (<http://www.satmax.ws>).

ID Digital CI-24 Sensor. New August 2003; new lower noise tuner, extra sensitivity; CI Interface slot Irdeto 1 & 2; review SF#109. Sciteq 61-8-9409-6677.

KSF-570 FTA digital receiver, import; KSC-570 adds CI x 2 (no test or user results available). Asoft Limited, 64-4-234-1096

KSC-N550H2 'Premium Dual DVR' digital receiver (no test or user results available). Asoft Limited, 64 4 234 1096

MediaStar D7.5 New (May 00) single chip FTA; review June 2000 SF. MediaStar Comm. Int. 61-2-9618-5777 (www.mediastar.com.au)

MediaStar D10 FTA and Irdeto embedded CA. VG receiver; see review SF#96, August 2002. Contacts immediately above.

MultiChoice (UEC) 660 Essentially same as Australian 660, not grey market contrary to reports. Sciteq tel 61-8-9306-3738

Nokia "d-box" (V1.7X). European, FTA, may only be German language, capable of Dr. Overflow software. SF#95, p. 14.

Nokia 9200/9500. When equipped with proper software, does Aurora, originally did pay-TV services provided software has been "patched" with "Sandra" or similar program. See SF#95, p. 14, SF#96 p. 15. SatWorld 61-3-9773-9270 (www.satworld.com.au)

Pace DGT400/DVR500. Originally Galaxy (Now Foxtel+Austar). Irdeto, some FTA with difficulty (Foxtel Australia 1300-360818). UECs replaced.

Pace "Worldbox" (DSR-620 in NZ). Non-DVB compliant NDS CA including Sky NZ, no FTA; similar "Zenith" version (see SF#115, p. 15).

Phoenix 111, 222, 333 models (no longer produced): Service, backup - Phoenix Technology Group 61 3 9553 3399; www.phoenixsatellite.com.au

Pioneer TS4. Mediaguard CA (no FTA), embedded Msym, FEC, only for Canal+Satellite (AntenneCal ++687-43.81.56)

PowerVu (D9223, 9225, 9234). Non-DVB compliant MPEG-2 unless loaded with software through ESPN Boot Loader (see below). Primarily sold for proprietary CA (NHK, CMT etc). For service only - call Scientific Atlanta 61-2-9452-3388. For revision model D9850, see Scientific Atlanta (below).

PowTek. Blind Search Chinese sourced, field tests rate it highly. Source jason@adigitalLife.com

Prosat 2102S. FTA SCPC/MCPC, NTSC/PAL, SCART + RCA. Sciteq 61-8-9306-3738.

SatCruiser DSR-101. FTA SCPC/MCPC, PowVu, NTSC/PAL. (Skyvision Australia 61-3-9888-7491, Telsat 64-6-356-2749); no longer available.)

SatCruiser DSR-201P. FTA SCPC/MCPC, PowVu, NTSC/PAL, analogue, positioner - (Skyvision - see above); no longer available.

SATWORK ST3618. Blind search FTA receiver. Fast search, problems, especially in "memory-filing" system; review SF#111. Available DMSi at tim@dmsiusa.com.

SATWORK ST3688. Blind search, 3000+ ch memory, multi-format RF modulator; improved version 3618. Review SF#113; available DMSi (above).

Scientific Atlanta D9223, D9234, D9225, Orig. PowerVu, superseded Dec 2003 by D9850. Commercial receiver, available TVO 61-2-9281-4481, John Martin

Strong Technologies SRT2620. SCPC, MCPC FTA, exc sensitivity, ease use, programming. Review SF#91 (ph. below).

Strong SRT 4600. SCPC, MCPC, PowerVu; exc graphics, ease of use, review SF#64. Strong Technologies 61-3-8795-7990.

Strong 4800. SCPC, MCPC, embedded Irdeto+ CAM slots, does code-key with additional software, Aurora. Strong Technologies 61-3-8795-7990.

Strong 4800 II. SCPC, MCPC CAM slots x 2 for Aurora +, Zee, Canal +, code key with additional software. Strong Technologies (above); review SF#103.

Strong 4890. SCPC, MCPC, 30Gb PVR, 2 CAM slots, DiSeqC 1.0, 1.2 (review SF#84), does code key with additional software, Strong Technologies, # above.

UEC Atlas/Titan (1000). New July 2003, replacing DGT400 for Austar. No SCART, L-band loop; also available Rural Electronics 61-2-6361 3636.

UEC642. Designed for Aurora (Irdeto), approved by Optus; w/new software, C-band FTA; faulty P/S. Norsat 61-8-9451-8300.

UEC660. Upgraded UEC642, used by Sky Racing Aust., Foxtel, limited FTA (Nationwide - 61-7-3252-2947); P/S problems.

UEC700/720. Single chip Irdeto built-in design for Foxtel; unfriendly for FTA. Power supply problems, seldom sold to consumers; propensity to fall off back of trucks.

"X" Digital. When modified with "aftermarket" Internet software, does Aurora and other V-1 CA without card; review SF#119. Strong Technologies (61-3-8795-7990).

Accessories:

Aurora smart cards. MCRYPT (Irdeto V2) cards now available (Jan 2005). Sciteq 61-8-9409-6677.

PowerVu Software Upgrade: PAS-8, 4020/1130Hz, Sr 26.470, 3/4; pgm ch 11 and follow instructions (do not leave early!)

PowerVu (Pacific) repair service: Cable & Sat Svcs, Darius West, 61-2-9792-1421 (Email darius@cases.net.au)

WITH THE OBSERVERS

AT PRESS DEADLINE

Too good to be true? SF#145, p. 19, reported on current status of Internet Video/IPTV. The viidoo.com (TVUPlayer) site highlighted is already under copyright attack; *HBO is gone* and the American networks are on the case to shut this one down or greatly throttle back at least its USA available material, proving the old adage, "If it seems too good to be true, it probably is!"

AMC23/173E: "Southern Cross Network testing 12.744H, FTA, Sr 5.100." (Paul)

AsiaSat 3S/105E: "Arabsat/ASBU bouquet on 3880H is now gone (to As2)." (DL, NSW) "CCTV mux has moved: 4129H to 4132H, new Sr 9.375." (JC, NSW)

NSS 5/177W: "Auckland uplink (SF#145, p. 1) is experimenting with various feeds (12.612V, Sr 28.357, 3/4)." (Steve, NZ) "Topfield STBs require all 3 PIDs to produce audio: 65 66 65 for Auckland uplink." (John) "Address to send in Tuesday evening videos is Tony Dunnett, 19 Jumento Place, Albany, North Shore, Auckland." (TD)

Optus B1/D1-160E: "Friday the 13th of October (not a good sign!) is date for launch of D1 replacement for B1!" (Craig S, NZ). "SKY NZ has added a new transponder to MUX - 12.393V and 12.420V (Sr 22.500, 3/4 as standard) (LK)

Optus B3/152E: "The three ABC (news) feeds continue on 12.319H, 12.328H, 12.337H - all Sr 6.980, 3/4. Imparja's feed continues 12.390, Sr 5.423, 3/4. Network Ten still runs occasional 12.400H at varying symbol rates. On 30 September Globecast fed the AFL Grand Final from Melbourne for Network Ten on 12.553V, Sr 6.670, 3/4 (FTA). Also on 30 September Globecast its Adhoc channel (12.563H, Sr 30.000, 3/4) sports news feeds out of the Sydney Ten studio." (IF, Qld.) "Globecast's MCPC updates: T5/12.525V, Sr 30.000, 2/3 Sigrum TV was running FTA but back to CA after weekend of 30 Sept-1 Oct.. T13/12.563H, Sr 30.000, 2/3 'SAFE TV' (US based Christian channel) began airing normal programming on the 20th of September; still FTA. 'AMTV', the Australian Multicultural TV, which originally promoted itself as being a FTA service, is sometimes CA using Irdeto V2 (September 22). T13/12.563H, Sr 30.000, 2/3 October 4th added a TV channel: 'Polsat 2' (V=1960, A=19320). It is Polish, FTA. Polsat 2 has always been on UBI, although it only became CA when UBI Irdeto V2 encrypted - and is still there. T11V/12.452H, UBI has added 'HUDA TV' (Arabic) SID 79. 'RTCG' has had a label added (T11L/12.425H) indicating it is from Montenegro suggesting Serbian language. Ch 72, UBI's information channel, has lost its modulation - no data or PIDs. And 'SCTV' on 1 October has corrected the EPG label - now correctly says 'Satellite Community Television.' (AI, NSW)

Optus C1/156E: "T11/12.305H, Sr 30.000, 3/4 (Austar Interactive) on around 9n September added a new channel labelled 'Tune'. It only loads a data PID running at 100



The "evidence" and the "argument." TVNZ's FreeView trademark, which has been turned down by the trademark registration folks, none the less appears on rolls of Maser (company) imported cable. Maser apparently claims they were given permission, in June 2006, to mark their imported RG6 cable with the logo you see here, which (difficult to see) includes a circled (r) indicating the logo and name are "registered." And the property of the FreeView "consortium." Not true.

But by marking it with (r) they are making a false assertion of the "rights" to FreeView - which are, at the moment, held by another. Section 186 of code says "instant \$1,000 fine" for violation.

KBit/s. T12/12.358H, Sr 27.800, 3/4 has added 'Show2' (V=1051, A=1052). 'Fox Sport 3' and 6 data PIDs were added October 4th - airing a NZ Rugby Union game according to the EPG. From October 1, all 'Fox Footy' channels have been rebelled as 'Spare' and their video data rates dropped to 1 MBit/s. Their EPGs advise, AFL now on Fox Sports; check listings. Due to the expiry of Foxtel's AFL broadcast rights, the FOX Footy Channel has ceased transmission. However, FoxSport 3 and Fox Sports News have launched on channels 503 and 513 respectively." (IF, Qld.) "Aurora update: T6/12.527V, Sr 30.000, 3/4 'ICTV' Imparja's Indigenous Community TV channel (V=1040, A=1041) became FTA at end of September. A government grant of A\$48 million to create a national Indigenous TV Service may be involved in this. Indigenous, in Australia, translates to 'Aboriginal and Torres Strait Islander.' T3/12.407V, Sr 30.000, 2/3 - on the 'INFO 156E information, page 11 has been modified to read as follows: 'Smartcard Activations. To help us process your

WITH THE OBSERVERS: Reports of new programmers, changes in established programming sources are encouraged from readers throughout the Pacific and Asian regions. Information shared here is an important tool in our ever expanding satellite TV universe. **Photos of yourself, your equipment** or off-air photos taken from your TV screen **are welcomed**. TV screen photos: If PAL or SECAM, set camera to f3.5-f5 at 1/15th second with ASA 100 film; for NTSC, change shutter speed to 1/30th. Use no flash, set camera on tripod or hold steady.

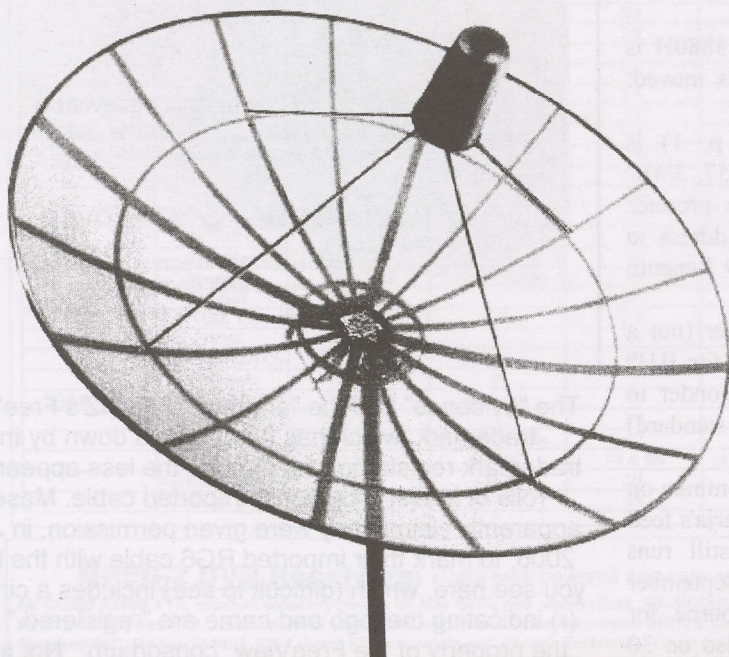
Alternately submit any VHS speed, format reception directly to SatFACTS and we will photograph for you. Deadline for November 15th issue: November 4th by mail or 5PM NZST November 5th if by fax to 64-9-406-1083 or Email skyking@clear.net.nz.



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Separating the hype, the fraud, from "Internet TV"

Mail and telephone call response to our #145 report updating the current state-of-play for television delivered via Internet suggests we should be at least providing monthly updates on this intriguing new bit of technology. At the end of this rainbow there remains, as reader Frank Cochran notes, "the distinct possibility that we will enter an era where Coop will no longer be a necessary source of information!" Don't plan on that Frank - we are capable (however reluctantly) of changing with the technology and times.

"Satellite TV for PC?" We have been warning you, the price-point had not been reached. Try this: "Get over 3000 stations for a small one-time fee. Once you have bought the software, you have nothing else to pay ... EVER! Instantly turn your computer into a super TV - now you can watch LIVE world-wide channels on your PC. You can also watch the big games LIVE without any additional fee or subscription." The price for this amazing opportunity? "\$50 (our price is in NZD \$ not US \$)." The four page advertisement distributed on the web and through FAX displays a wide range of channel logos (primarily from our listing SF#145, p. 19) but generously adds a few which we very much doubt are currently available "on the web" ([V], Animal Planet for example). So what does NZ\$50 deliver to you? (Actually it is NZ\$58.90, the extra being for "postage, packaging and handling") A piece of software.

Have we tried it? No but point out TVUPlayer provides its own web delivered software which loads in under a minute; free. And there are many other (hundreds in fact) of similar software programs designed to unbundle video data streams, also free. They go on to claim, "Satellite TV for PC (tm) is the product of more than 7 years of dedicated research and development. The development costs of this product alone are more than \$276,480 ... required 3 years of intense testing and development utilising software developers from Microsoft, IBM and other leading technology companies." None of which the sellers of this copied product paid for themselves. \$50? Next month, \$29.95 and by Christmas \$19.95! Kiwi source for this? Not here but it is interesting to note there was a much earlier version of the same "product" at US\$49.95 from www.satellitettvtopic.com.

And a free version can be found at www.tvkoo.com/en/download.htm.

And the rush to be on the web with programming continues. There are still those believe selling recent episodes of network fare (CBS in particular) at US\$1.95 each is the way to go while the trend now seems to be the intact network show (intact means the adverts are in place) FTV (free to view). And the latest additions: Fox Broadcasting (Murdoch's USA network) has announced they are now streaming on MySpace.com (Murdoch's recently acquired www site) though a new web subsidiary called appropriately Fox on Demand. These shows will be streamed in HD (well, provided all of the links between you and the nearest server will support one gigabyte per second-plus) using their own software (Fox Full Throttle) which is available on yet another company website (Fox Interactive Media) for downloading. Additionally, 24 local (such as New York [City]) Fox stations will have their own web sites offering the same service on a local or regional basis. Another related Murdoch item: US broadcasting trade press heavy with reports Murdoch is trying to peddle his controlling interest in USA DirecTV satellite service, believing "satellite is a dead end street that will ultimately not be able to compete with broadband telco delivery of streamed TV programming." Murdoch leaving the satellite biz? Oops!

Competitive USA network NBC has responded with its own software player ("NBC24/7") and is now streaming 'prime time' (evening time) programming on a slightly delayed basis - at 2AM Pacific time the prior evening's prime network schedule is placed "on the web" where it remains for seven days - until updated or replaced with the new week's schedule.

Not a TV network, but a network provider, AT&T (the USA's oldest telephone network) is now offering 20 TV channels via "hi-speed Internet" for US\$19.95 per month. The channel line-up is less than impressive however, programming historically the weak link in telephone company offerings. Fox News and The Weather Channel don't add up to \$19.95 per month. The service requires 500 kbps connections to function properly.

Meanwhile in the UK, Murdoch controlled BSkyB has shut down its new broadband delivery of TV programming over what they claim are "security fears." In the USA (and soon elsewhere) Apple Computers has been doing very well offering full length original movie down loads, and BSkyB UK was offering a similar service. Turns out a software block to 'sharing of downloads' using something called DRM (digital rights management) has been breached in Europe and hackers had found a way to download a film and then share it - something DRM was supposed to prevent. Until the DRM issue is worked out, something that requires the assistance of the creator Microsoft, BSkyB movie downloads "have been temporarily suspended."

You might assume, in error, that with all of this TV via www growth the basic delivery technology has been pretty much worked out. Not so - witness the plurality of software packages available, each proprietary to the creator (Fox Full Throttle, NBC 24/7 to name two). So the Japanese majors in the hardware business have created what they hope will become the world's (first) "Internet TV Standard." Hitachi, Matsushita, Sharp, Sony and Toshiba have created a new set of parameters that will allow them to manufacture TV receivers with a new input connector - one that links the TV set to the nearest broadband (Internet) connection point. Presently, IPTV (Internet Protocol Television) pretty much demands a PC as the viewing instrument - the range of codecs, encoding schemes, bit rates, resolutions and copy protection techniques defy a hard-wire solution. A PC has the ability to download new software for a specific purpose (such as "NBC 24/7") when the PC user wishes access. The TV set is built around international standards (NTSC, PAL, SECAM) and changing the parameters to adapt to varying standards on the fly is essentially impossible. The Japanese set makers believe, hope may be more appropriate, that by creating one "Internet TV Standard" which will be available in a wide range of TV sets, programmers such as Fox and NBC will see the wisdom to adopt these standards - so as to reach the maximum number of TV sets at the consumer level without the need for downloading of new system-specific software for each service.

Satellite Expo 2007 Update

The largest gathering of satellite TV world technicians, engineers and installers is scheduled for April 18-21 with a special sub-set for C-band pioneers April 19-21 including a 'C-Band Pioneers Dinner' Friday evening April 20th. The venue is Atlanta, Georgia (www.satelliteexpo2007.com or www.bobcooper.tv, click on 'C-Band reunion'). Industry pioneer Chaparral Communications is sponsoring the Friday night C-Band reunion dinner and those attending will have ample opportunity to meet and greet some of the truly creative people that in laying down the foundation for C-band direct TVRO also by happenstance also created the hardware and rules for the latter Ku-band direct small dish services.

There is a name (only) change to reflect a broader four-day focus; Satellite Expo 2007 is now SBE 2007 (Satellite and Broadband Expo 2007). The new branding and expansion into the broadband marketplace makes perfect sense given that a large percentage of attendees at this annual event are now into VSAT as technicians and dealers in hardware.

That interconnection bottleneck: PC to TV

As we report here (p. 28), Rupert Murdoch is considering abandoning (selling) his interest in DirecTV - the primary supplier of Ku band DTH for the USA - in favour of concentrating on broadband telco linking for TV programming. And as always, he is several steps ahead of the competition. Example: DirecTV will in December begin delivering DirecTV STBs which will have IPTV built-in. Meaning? All homes equipped with the new box will have broadband access to IPTV (Internet Protocol Television) which of course would include MySpace.com, Murdoch's new www address which includes access to MyFox (TV) and other services. Hey - if you are going abandon satellite in favour of the next replacement system, why not "salt" the populace with a ready made box that will deliver not only the "interim technology" DirecTV but the next delivery system as well - especially when that is where you are headed! DirecTV's new STV will interconnect to regular or HD TV sets but it will be a wire connection, not wireless - initially. The STB is to be known as "DirecTV Plus HD DVR" is actually itself an interim device, more of a "transfer" system than a fully www connected system. The user will still require a PC equipped with something known as Viiv (from Intel) which is at this time in short supply and only supported by one software product (Netgear). This is actually a "digital media adapter" rather than a full-blown IPTV reception system capable of interfacing between a broadband telephone connection and the TV set. Still, it shows where Murdoch is headed.

World "TV Broadcast 50 Year Copy-rights?"

A new international treaty, having the force of law in any country where it is adopted, could spell an end to virtually all TV programme recording even at the private, home level. The driver behind the proposed treaty is, of course, the American TV networks (pay and FTA) who are in some fear that as Internet spreads and its capabilities improve, American TV programming, heretofore an export product to be sold by American TV companies, will become a FTV (free to view) product world-wide. The World Intellectual Property Organisation, backed by the MPAA and other groups representing 'right holders', wants a new planet-wide law. It would limit or prohibit watching TV shows on a digital video recorder, transmitting a sporting event to a laptop through a device such as Slingbox, or even moving video from one device to another in the same home. Each of these would become 'retransmission' and require permission from the originator (cable, satellite, FTA) before it could happen. The object is to prohibit devices which can burn DVDs of TV programming, no matter how the programming is received (home video would be exempted), or which merely receive and then relay the reception to another device - whether inside of or outside of the home where the service is actually received. Under the proposal, "broadcasters" would have 50 year copyrights - this would be a second layer of copyright, on top of the original (existing) copyright which programming creators already receive. A number of opponents to the draft law, including the UN, believe it would be a restriction on the flow of news broadcasts and other information now considered to be in the public domain. But broadcasters say they need this new treaty to be able to continue to sell their products "overseas."

request quickly, please email or fax your activation requests to: Email - SSS@optus.com.au; Fax - 1300 555 221.' " (NS, Victoria)

PanAmSat PAS-8/166E: "BBC World India is gone from 4027V." (NK)

Soapbox: "On about 14 September WIN-TV Orange NSW began airing ads for SelecTV. Originally they aired the same ad a few times a day, by the end of the month they had six different adverts frequently through the day, sometimes two different ads in the same break. All ads are for the standard English language package of 20 channels (\$29.95 per month). There is no telco number given, only their web site (www.selectv.com). Several of the ads demonstrate how to navigate their web site. Especially missing is The History Channel (or History-Bistory as Tim Alderman would label it). Hopefully, SelecTV will not become 'history' as the previous occupier of these PAS-8 transponders did (TARBS). Now AUSTAR is battling the advertising with their own radio and TV blitz campaign, also \$29.95 but only the TV ad mentions a contract period is required." (AI, NSW) "Regarding IPTV, also check out www.limewire.com, www.bitlord.com, www.bearshare.com and www.torrentspy.com." (D Leach, NSW)

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Bob Cooper
P O Box 330
Mangonui
Far North
New Zealand.

19 July 2006

Dear Bob,

Many thanks for the copy of *Television's Pirates* which has just arrived -- I can barely lift it!

I'm very glad you wrote your memoirs, because this is a fascinating collection of anecdotes and a vital part of the TV broadcasting and satellite communication history. It's a part that official writers and pure academic researchers may well underplay in their own accounts.

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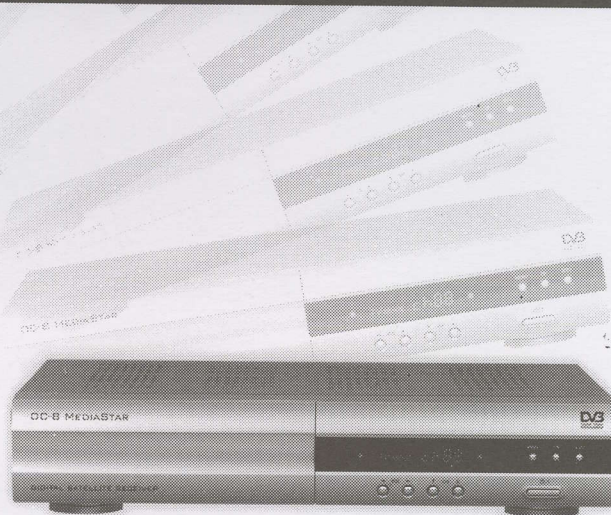
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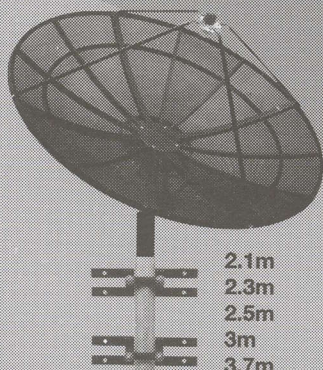
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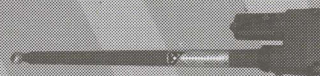


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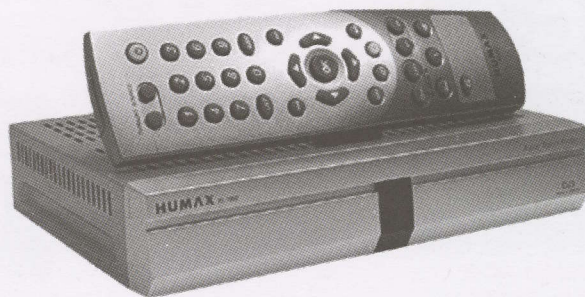
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